

**ANVESHANA'S INTERNATIONAL JOURNAL RESEARCH IN ENGINEERING  
AND APPLIED SCIENCES.**

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**INTERNATIONAL CONFERENCE ON RECENT CHANGES IN COMPUTATIONAL  
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**Message**

AERF aims to educate researchers for the future to build and maintain quality oriented research related to Engineering, Management, Pharmacy and other domains as well. We believe these researchers,, contribute to make a difference to their Colleges and Universities and to the world around them. In our endeavours, we draw upon reserves of goodwill among the quality oriented research, its reputation among researchers,, and a potential student, commitment is the key strength to AERF.

The future holds tremendous promise for our organization we look forward to being recognized as one of the premier research organization which meets the quality standards across the globe. To achieve this goal, the organization is following a three-pronged approach: connect, nurture, and grow. We will:

CONNECT proactively with the worlds of practice and policy, with academic work nationally and globally, with our research work, and with the local community.

NURTURE a high performance work environment by emphasizing and supporting a climate of autonomy, stretch, and team work.

GROW our capacity, but do so in a thoughtful and strategic manner, aiming to have an impact commensurate with our ambitions, and ensuring that we maintain and upgrade the quality of our people and our experience.

**Dr. D. Sucharitha**  
Director – AERF

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I am immensely happy to announce that Conference at AERF is organizing a one-day National Seminar titled "Innovative Methods and challenges in Sciences, AERF as an institution continues to march towards success with confidence and pride. The sharp, clear sighted vision and precise decision-making powers of our management has benefited our college to stay competitive and focused. The dedicated faculty fraternity, non-teaching staff members and disciplined students of AERF are the added features of our college. The role of students in building nation cannot be overlooked and students at AERF are trained in all aspects to become successful managers, entrepreneurs and good citizens. I thank all the participants from various colleges for participating and presenting research papers on various topics and enlightening with the recent updates. It is a matter of great pride that the organizers of the national seminar have been successful in creating a huge impact on the target participants with in a short time. The overwhelming response received from all over the country is simply amazing and motivates us to conduct such programs in the future. We take this opportunity to acknowledge that the seminar has been organized in collaboration with AERA and thank for their warm support. On behalf of the Department of Finance, I would like to thank the Management of AERF for their untiring efforts and constant endeavour to make the National seminar scaling to new heights.

**Dr. Rajendra Prasad  
Principal, Sana Engineering College Kodad.**

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As a Member of the Organizing Committee, I wish to extend a warm welcome to the International Conference on INTERNATIONAL CONFERENCE ON RECENT CHANGES IN COMPUTATIONAL TECHNOLOGY AND ELECTRONICS ICRCCTE-2018. It is my pleasure to welcome you to this important event. Even though a new era in the Electronics supporting more than half a century ago, leading to a dramatic improvement in the field of Electronics. Especially, after a varying number of years the presently available methods start to loose much of their efficiency, with disturbing side effects more and more taking over the scene.

**Dr.K.Thirupathi Rao**

Professor Department Of Computer Science And Engineering,  
Klef Vaddeswaram

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**FPGA IMPLEMENTATION OF CRYPTOGRAPHIC SYSTEM USING BODMAS SEQUENCE OF  
OPERATIONS**

**Paper ID-1001**

**A paper presented by:** Narendra Babu T., Noorbasha F., Krishna S., Sai Charan K., Sai Kalyan R.S.V.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

In this paper, a new Encryption algorithm is proposed which is high secured and data is transmitted securely over unreliable communication channel. In this algorithm we generate random numbers by using Linear Feedback Shift Register (LFSR) and input data is encrypted by performing sequence of BODMAS operation with random numbers generated by LFSR. The proposed work is simulated, verified and synthesized using Xilinx by Spartan 3E FPGA.

**EXPERIMENTAL STUDY ON STEEL FIBER CONCRETE**

**Paper ID-1002**

**A paper presented by:** Chaitanya Kumar J.D., Manikanta Sai G., Taraka Ram V., Abhilash G., Kasim Khan P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

Experimental study on Steel Fiber concrete for M20 grade having mix proportion 1:1.96:2.63 and water cement ratio of 0.45 to study the compressive, flexural and split tensile strength of Steel Fibred Reinforced Concrete (SFRC) containing fibers of 1%, 2%, 3%, volume fraction. In this study steel fibers of Aspect Ratio 50, 60 and 67 were used. The result obtained is analyzed and compared with a control specimen (0% steel fiber). The Relationship between Aspect ratio vs Compressive strength, Aspect ratio vs flexural strength and Aspect ratio vs split tensile strength is represented graphically. Result shows the percentage increase in compressive strength, flexural strength and split tensile strength for 28days.

**RADIAL STUB LOADED ANTENNA WITH TAPERED DEFECTED GROUND STRUCTURE**

**Paper ID-1003**

**A paper presented by:** Syam Sundar P., Kotamraju S.K., Madhav B.T.P., Sri Vishnu Sairam S., Srinivas A.,  
Neelima K., Sravanthi G.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

A compact pentagonal shaped slot antenna for multiband applications is proposed. The antenna comprises of a T-shaped patch on one side of the substrate. The top surface of the patch consists of a serrated edge for bandwidth enhancement. The antenna is fed by a 50-Ω microstrip line. A Defected ground structure is employed by placing a pentagonal slot in the ground plane of the antenna. The antenna possesses a compact physical structure with dimensions of 30 x 30 x 1.6 mm and is printed on FR4 epoxy substrate with dielectric constant 4.4. Simulations are carried out using Ansys HFSS. The proposed antenna exhibits a -10 dB magnitude for frequency bands 2.5-3.02 GHz, 4.59-7.053 GHz and 13.06-13.48 GHz covering various multiband applications. The antenna is fabricated successfully and is further characterized by measuring VSWR, radiation pattern and gain. The measured results are in good agreement with that of the simulated ones.

**PERFORMANCE OF FIVE PHASE INDUCTION MOTOR USING SPECIALLY CONNECTED  
TRANSFORMER**

**Paper ID-1004**

**A paper presented by:** Jyothi B., Venu Gopala Rao M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

Earlier the production of multiphase system was a challenging task, but with the advance in the ratings of power semiconductor switches it turned to be effortless through inverters. The main cause for developing multi-phase system is that, it has some dominant features over the conventional three phase system. In order to obtain a five phase supply a specially connected transformer is proposed instead of an inverter. The induction motor (five phase) feed by the five phase output of the specially connected transformer. The performance of the motor is analyzed under balanced as well as unbalanced supply conditions and also under stator fault conditions.

**DYNAMIC SEARCH TECHNIQUE USED FOR IMPROVING PASSIVE SOURCE ROUTING  
PROTOCOL IN MANET**

**Paper ID-1005**

**A paper presented by:** Sultanuddin S.J., Hussain M.A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

Mobile Adhoc Network are dynamically configurable and organized network, without any existing infrastructure. It is an integration of numerous wireless nodes. To communicate between the nodes efficiently, A routing protocol builds the route efficiently between the nodes within a network. The routing algorithm should dynamic discover a route; effectively maintain the route with minimum overhead and bandwidth. Our work proposes a novel Passive Source Routing protocol that has a very small communication overhead. The proposed work enhances light-weight passive source routing protocol for MANETs, to enhance the PSR, we use Dynamic search algorithms namely DSF, DSRW and Knowledge Based -DS to discover the route. In such method, every node of the wireless network contains a neighbor table. Such table contains each node and its neighbors with distance between them. Therefore, each node has a full topology of the wireless network which is useful to discover the route. Periodic information exchange is used to update such table. The solution of routing are analyzed in MANET and performance are evaluate using NS-2 simulator with various network parameters.

**ESTIMATION OF PHASE MULTIPATH IN GPS WITH SNR**

**Paper ID-1006**

**A paper presented by:** Siridhara A.L., Venkata Ratnam D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

In GPS the satellite signal is easily disturbed by the objects in the surroundings of receiver which reduces the accuracy in amplitude and phase of the receiving signal. As a result of the reflections of the signals, carrier phase multipath is caused which is the major problem at GPS receivers. Multipath is the propagation phenomenon in which the signals received by antenna other than line of sight signal is called multipath signal. Multipath signal is superimposed on the direct signal. GPS receivers provide the signal to noise ratio (SNR) used for estimation of multipath errors. Signal Quality Measurement is used for computation of phase error in the signal. In this paper we are using MUSIC algorithm to calculate the multipath parameter i.e amplitude and multipath phase. We are estimating the errors that are occurred due to the multipath which is further used to improve GPS signal precession.

**MICROSTRIP PARASITIC STRIP LOADED RECONFIGURABLE MONOPOLE ANTENNA**

**Paper ID-1007**

**A paper presented by:** Sreenivasa Rao D., Lakshmi Narayana J., Madhav B.T.P., Dinesh Kumar K., Anil Kumar B., Karthik G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

In this work a compact S-shaped monopole antenna is designed to operate in the wide band range from 7 to 16 GHz. The S-shaped radiating element is divided into different sub blocks and later microstrip parasitic strips are used to unite the independent blocks. Different orientations of strips and without strip loaded configurations are examined in this work for tunable applications. The shift in the center resonant frequency is absorbed from all these iterations with the conditions of switch positions in ON and OFF modes and the results are examined with respective to operating frequency band. The proposed antenna with all strips in ON condition is prototyped on FR4 substrate and tested on ZNB 20 VNA for validation.

**REACTOR AND COLUMN LEACHING STUDIES FOR EXTRACTION OF COPPER FROM TWO  
LOW GRADE RESOURCES: A COMPARATIVE STUDY**

**Paper ID-1008**

**A paper presented by;** Panda S., Mishra G., Sarangi C.K., Sanjay K., Subbaiah T., Das S.K., Sarangi K.,  
Ghosh M.K., Pradhan N., Mishra B.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

Two ore samples, one obtained from a partially leached heap with suspended operations for about four years and the other through sonic drilling of a discarded dump were tested for the amenability/feasibility of copper extraction through reactor and column leaching. Mineralogical analysis of the samples indicated the dominant sulphide minerals to be chalcopyrite and pyrite. Various process parameters such as the effect of acid concentration, time, oxidant, pulverization and temperature were studied for the reactor leaching experiments. A maximum of 91% Cu extraction can be achieved while leaching the pulverized sonic drilled sample at 90°C for 3 h. On the other hand, column leaching studies at 1 kg scale showed 65-70% Cu extraction with an acid concentration of 2.7% (v/v) for both the samples. Sequential leaching of the chemically leached residues of both sonic drilled and heap leached pad sample yielded additional 13.2% and 22.2% Cu, respectively in 20 days of bacterial leaching using a mixed culture of meso-acidophilic bacterial consortium. Column leaching studies showed that the heap leached pad sample was more amenable to leaching than the sonic drilled one. Further, during the downstream processing of the leach liquors, the solvent extraction efficiency was about 95% and the Cu metal deposited by electrowinning was of 99.9% purity. A tentative process flowsheet for the recovery of copper was also prepared.



**IN VITRO AND IN SILICO CHARACTERIZATION OF ANGIOGENIC INHIBITORS FROM  
SOPHORA INTERRUPTA**

**Paper ID-1009**

**A paper presented by:** Mathi P., Veeramachaneni G.K., Raj K.K., Talluri V.R., Bokka V.R., Botlagunta M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

The growth of Indian Economy is a combination of contribution of different sectors. The banking industry is the back bone of Indian Economy and its growing role in the Global Economy. Since, nationalization banking industry has witnessed many ups and downs in its sustainability. Though the banking industry is regulated by the Reserve Bank of India and policies of the Government from time to time towards its sustainability it needs to bring reforms in the strict implementation of Banking Regulation Act. During last two decades, banking industry has been reeling under financial crisis, losses and debts due to liberal loan sanction policies and poor recovery rate. This was due to frauds and corrupt practices due to some or other reason. This leads to financial burden not only on the Government but also on the people of the country. The present research paper examines the reasons for financial frauds and necessary suggestions are being made to mitigate the frauds and to develop strong and efficient control mechanism.

**DES SECURED K-NN QUERY OVER SECURE DATA IN CLOUDS**

**Paper ID-1010**

**A paper presented by:** Ranjeeth Kumar M., Srinivasu N., Reddy L.C.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Protecting databases or data contents from the web world environment is a tough task for a company. Because every Company/ Financial Institute/ Hospital was hiding their customers or end users list secretly and will not open for all. But now Toms gang (Hackers) made this possible and tries stealing the data and major portion. In these conditions securing the data outsourcing area such as web hosting and cloud space storage option are becoming very prominent. To manage the situation many were out with secured sharing solutions. Now one more novel approach with high secured and efficient sharing option in data retrieving by end user is demonstrating in this paper. The technique is comprises with two famous algorithms one is DES an encryption scheme and the next is K-NN query passing and data retrieving code.

**ENERGY AWARE ROUTING FOR MANETS BASED ON CURRENT PROCESSING STATE OF  
NODES**

**Paper ID-1011**

**A paper presented by:** Mohammad A.A.K., Mirza A., Vemuru S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Wireless mobile ad hoc network composed of mobile nodes (MNs) without any Pre-established Infrastructure. MNs are free to move and organized themselves to form a network over radio Communication area. In this environment establishing optimistic route between source to destination is challenging due to limited battery powered heterogeneous mobile nodes. Thus MANETs needs an efficient dynamic routing protocol with respect to energy in order to extend the network lifetime. In this work, we design a new energy aware reactive routing protocol for MANETs to avoid the node to become bottleneck. This Mechanism addresses the two important network performance attributes i.e., network lifetime & link stability. Performance analysis has been evaluated with the help of NS2. Simulation results indicate that our developed mechanism is better than the existing energy aware AODV routing protocols.

**MATHEMATICAL ANALYSIS OF PENETRATION TESTING AND VULNERABILITY  
COUNTERMEASURES**

**Paper ID-1012**

**A paper presented by: Reddy M.R., Yalla P.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Penetration Testing is a security research and study of exploitation methods with counter measures to protect web applications from attacks and intruders. It is the art of exploiting the weakness that has been identified in the system under test. Identifying the insecure areas is the major task; the goal is to protect sensitive and the valuable data. All the safety vulnerabilities which are present in the system should be exposed with penetration testing. Vulnerabilities are caused due to Design and development errors, Human errors, poor system configuration In this paper we concentrated on different types of penetration testing methods such as Social Engineering, Application Security Testing and Physical Penetration Testing. We focused on different tools involved at different situations at different methods, specifications, requirements, planning and scoping for successful penetration testing using automation tools, manual procedures and auto-manual procedural tools. The mathematical and algorithmic procedure is discussed and proved along with the simulation and graphs, finally design and implementation of penetration testing tool is given with practical analysis and result. Cyber Security and Code Security are the major tasks in Testing, where security is the major task in businesses world as attacks on code or cyber can cutoff the profits as well as reputation of the business enterprise. The major role of penetration testing is to detect and fix the vulnerabilities like malicious code or backdoors. Finally we concluded by development of data security strategies and tools which support the Penetration Testing and role of Advanced Penetration Testing and scope of feature work.

**ADVANCED PERSISTENT THREAT DEFENSE SYSTEM USING SELF-DESTRUCTIVE  
MECHANISM FOR CLOUD SECURITY**

**Paper ID-1013**

**A paper presented by:** Chandra J.V., Challa N., Pasupuleti S.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A Number of Dynamics such as on-demand and versatile cloud services, software interoperability standards, high bandwidth dynamic communication technologies, broad network access, virtualization technology, privacy and security measures made cloud computing so popular, where as Security is a key inhibitor to the cloud. In this paper we discussed different risks, threats and attacks. We focused on Advanced Persistent Threat which is stealthy, targeted and data focused, progressive defense system is designed and Implemented along with mathematical analysis concerned with networks and algorithms. A self-destructive and Constructive mechanism is adopted using bilinear mapping and reverse engineering methods. Prime issues for cloud securities such as Confidentiality and Authentication are discussed. A Practical and Computational Approach is designed and implemented using cryptography concepts such as Computational Diffie-Hellman assumption and ElGamal encryption and fuzzy logic system based on Advanced Intelligence system through a mathematical transformation and finally conceptual analysis is given.

**DESIGN AND IMPLEMENTATION OF MF-MB CANCELLATION DETECTION IN  
TRANSMISSION OF PHYSICAL LAYER NETWORK**

**Paper ID-1014**

**A paper presented by:** Suneela B., Krishna Rao E.V., Sri Kavya K.C.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Today's Wireless networks have become more and more prevalent to promise global digital connectivity, and wireless devices have quickly evolved into multimedia smart phones, which run applications that demand high-speed data connections. MU-MIMO (Multi-User Multiple-Input-Multiple-Output) wireless method has received considerable attention as a way to meet such demand by achieving high efficiency. In this paper consider a Physical-layer Network Channel and proposed a less difficulty of MF-SIC (Multiple Feedback Successive Interference Cancellation) strategies with multi-branch (MB) processing for achieving higher detection diversity order. Additionally, LDPC (Low-Density Parity-Check) coded are used for making proper detection and performance at low complexities which are used towards removing the inter-symbol interference, as well as spatial effects to large dimension of delay spreads with MIMO channel. The experimental results show that these new detection systems considerably beat the previous SIC receivers as well as moderate the singularity of propagation error with low processing delay.

**COMPACT FRACTAL MONOPOLE ANTENNA WITH DEFECTED GROUND STRUCTURE FOR  
WIDE BAND APPLICATIONS**

**Paper ID-1015**

**A paper presented by;** Giridhar V., Ramakrishna T.V., Madhav B.T.P., Bhavani K.V.L., Reddiah Babu M.V.,  
Sai Krishna V., Krishna G.V., Mohan Reddy S.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This letter presents a novel fan wing shaped uniform one dimensional fractal pattern antenna. The proposed antenna consisting of different inverted L-shaped elements to form a fan wing shaped structure. The design model achieved huge bandwidth characteristics with average gain of 4 dB. The simple structure of the proposed antenna with light weight makes it appropriate for many wireless communication applications. The simulated results on HFSS and measured results on ZNB 20 Vector Network Analyzer show that the proposed antenna has very good performance in impedance bandwidth and radiation pattern.

**CONTINUOUS SIGN LANGUAGE RECOGNITION FROM TRACKING AND SHAPE FEATURES  
USING FUZZY INFERENCE ENGINE**

**Paper ID-1016**

**A paper presented by:** Kishore P.V.V., Kumar D.A., Goutham E.N.D., Manikanta M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Fuzzy classifying continuous sign language videos with simple backgrounds with tracking and shape combined features is the focus of this work. Tracking and capturing hand position vectors is the artwork of horn schunck optical flow algorithm. Active contours extract shape features from sign frames in the video sequence. The two most dominant features of sign language are combined to build sign features. This feature matrix is the training vector for Fuzzy Inference Engine (FIS). The classifier is tested with 50 signs in a video sequence. Ten different signers created 50 signs. Different instances of FIS are tested with different combination of feature vectors. The results are compared with our previous work using no tracking and with discrete sign language database. A word matching score (WMS) gauges the performance of the classifiers. A 92.5% average matching score is reported in this work. A through comparisons for FIS gesture classifier between Discrete Cosine Transform features, Elliptical Fourier descriptor features and the proposed hybrid features for continuous sign language videos show a 40% jump in word matching score



**ENHANCEMENT OF CPW-FED INVERTED L-SHAPED UWB ANTENNA PERFORMANCE  
CHARACTERISTICS USING PARTIAL SUBSTRATE REMOVAL TECHNIQUE**

**Paper ID-1017**

**A paper presented by:** Reddy S.S.M., Rao P.M., Madhav B.T.P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

For the exchange of high rate information, wide band antennas are needed and their usage increased tremendously now a days. One of the major challenges in the design of Wideband antenna is the design of a small size antenna while providing wide bandwidth, omni-directional radiation pattern and stable gain. The proposed antenna consists of a monopole patch loaded with truncated L-shaped strip. The ground is extended vertically towards the two sides of the single radiator to improve the bandwidth. The size of the proposed antenna is  $25 \tilde{\text{A}} \times 25 \tilde{\text{A}} \times 1.6 \text{ mm}^3$  and is prototyped on FR4 substrate whose permittivity is 4.4. The proposed antenna is providing wideband characteristics with suitable gain for wireless communication applications.

**BASELINE WANDER REMOVAL IN CARDIAC SIGNALS USING VARIABLE STEP SIZE  
ADAPTIVE NOISE CANCELLERS**

**Paper ID-1018**

**A paper presented by; Salman M.N., Rao P.T., Rahman M.Z.U.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India**

**Abstract:**

Adaptive Noise Cancellers (ANCs) are used to remove noise from the cardiac signals. In remote health monitoring system signals must be free from artifacts. In the proposed paper an attempt has been made to present a new ANC using Normalized Variable Step Size Least Mean Squared (NVLMS) algorithm. Sign Regressor Algorithm can reduce Computational Complexity and also to maximize the normalization of the algorithm. This type of implementation is suitable for remote health care monitoring system, as these systems require large Signal to Noise Ratio (SNR) and with the least computational complexity. The new ANC is tested on cardiac signals obtained from the MIT-BIH database. Simulation results confirm that the performance of the proposed algorithm is better than the conventional noise cancellers.

**NON-NEWTONIAN LUBRICATION OF ASYMMETRIC ROLLERS WITH THERMAL AND  
INERTIA EFFECTS**

**Paper ID-1019**

**A paper presented by: Prasad D., Sajja V.S.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This research work explores the effects of thermal and inertia on hydrodynamic lubrication of asymmetric rigid rollers by incompressible non-Newtonian power law fluids and assesses the contribution of inertia to the system under consideration. The consistency of the power law lubricants is assumed to vary with the pressure and mean film temperature. The governing equations are solved first analytically and then numerically by the Runge-Kutta-Fehlberg method together with some reasonable tolerance. The results obtained confirm that there is significant increase in load and traction due to inertia. In addition, the effect of inertia shifts the pressure peak and the cavitation points toward the left.

**PNEUMATICALLY DRIVEN TWO WHEELER- AN EXPLORATION AT DESIGN PARAMETERS  
AND EXTRA POSSIBLE BENEFITS**

**Paper ID-1020**

**A paper presented by; Parise D.P., Murty A.S.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India**

**Abstract:**

A two wheeler with payload of 100Kg already in use in many parts of India driven by petrol and known as 'moped' is considered in this work. Its conversion or retrofitting to a pneumatically driven vehicle is the objective of this design parameters exploration. In a simplified manner with least disturbance to the existing configuration a moped, a light two wheeler used in India extensively is considered for this. The design parameters are calculated to enable retrofitting. The study is based on Brayton cycle with multiple iso-thermal resulting due to implicit and unavoidable heat transfers in the engine and its ambience. Two accumulators with 300 bar and 10 bar pressures of air are recommended that can address and avoid the possible failure sources of previous design attempts. Integrating the chassis and previous fuel tank locations for the location of primary and secondary accumulators is very much possible. Avoidance of ON-board combustion thereby avoiding pollution is an obvious possibility. Besides other advantages are also discussed.

**BIG DATA SEARCH SPACE REDUCTION BASED ON PATTERN TYPE AND USER PERSPECTIVE  
USING MAPREDUCE**

**Paper ID-1021**

**A paper presented by:** Satyanarayana S., Jagadesh B.N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Big-data takes us into new epoch of data, which commonly referred to be as a big data. It poses a challenge to the researchers with more velocity, more Variety and large volumes. Where the commonly used softwareâ€™s are not able to imprison, accomplish and process within the lapsed time. Furthermore, there is a need to discover new procedures for to process large volumes of data to optimization, data mining and knowledge discovery. This ambition and motivation drives the researchers to Big-data analytics and big-data mining. Over the earlier few centuries, different procedures have been proposed to use the MapReduce model-which decrease the space of search with distributed or parallel computing-for different big data mining and analytics tasks. In this paper we propose an algorithm which reduces the search space based on userâ€™s perspective and MapReduce to mine valid frequent patterns, approximate patterns and rare patterns from high volumes of ambiguous data in a divide-and-conquer fashion and we evaluate the performance through Hadoop.

**RESIDUAL RISK ASSESSMENT FOR SOFTWARE PROJECTS BY CONSIDERING SUB FACTORS  
FOR THE RISK FACTORS**

**Paper ID-1022**

**A paper presented by:** Lingareddy L., Sridhar P.S.V.S., Swathi Nellipudi V.R.D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Risk management plays crucial role in software development. Risk can be occurred at any stage of development of project with respect to some parameters. Risk mitigation is technique to minimize risk in the result during development. In this paper we presented theoretical approach for avoiding residual risk by considering all the sub factors for top ten risk factors. We have identified the priority of each risk factor and identified solution to minimize risk.

**A COMPARATIVE STUDY ON DATA DEDUPLICATION TECHNIQUES IN CLOUD STORAGE**

**Paper ID-1023**

**A paper presented by:** Tirapathi Reddy B., Ramya U., Chandra Sekhar M.V.P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Now A days with the wide popularity of cloud computing many users of the computer system are using cloud computing for variety of services. Cloud offers various services to its users on a pay as you use basis. With the rapid growth of data rates with every user,users are attracted towards the cloud storage to store huge volumes of data. But with this there is a possibility that most of the data available in cloud storage is redundant. We need to eliminate the redundant copies of the data to utilize the cloud storage space effectively; thereby we can reduce the storage costs of a user or organization. There are various DE duplication techniques available to eliminate the redundant data items so that we can keep only one copy of the data item. This paper deals with various mechanisms available to eliminate redundant copies of the data,and also addresses the drawback and advantages of all these mechanisms.

**OPTIMIZING MACHINING PARAMETERS OF WIRE-EDM PROCESS TO CUT AL7075/SICP  
COMPOSITES USING AN INTEGRATED STATISTICAL APPROACH**

**Paper ID-1024**

**A paper presented by: Rao T.B.**

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Metal matrix composites (MMCs) as advanced materials, while producing the components with high dimensional accuracy and intricate shapes, are more complex and cost effective for machining than conventional alloys. It is due to the presence of discontinuously distributed hard ceramic with the MMCs and involvement of a large number of machining control variables. However, determination of optimal machining conditions helps the process engineer to make the process efficient and effective. In the present investigation a novel hybrid multi-response optimization approach is proposed to derive the economic machining conditions for MMCs. This hybrid approach integrates the concepts of grey relational analysis (GRA), principal component analysis (PCA) and Taguchi method (TM) to derive the optimal machining conditions. The machining experiments are planned to machine Al7075/SiCp MMCs using wire-electrical discharge machining (WEDM) process. SiC particulate size and its weight percentage are explicitly considered here as the process variables along with the WEDM input variables. The derived optimal process responses are confirmed by the experimental validation tests and the results showed satisfactory. The practical possibility of the derived optimal machining conditions is also analyzed and presented using scanning electron microscope examinations. According to the growing industrial need of making high performance, low cost components, this investigation provide a simple and sequential approach to enhance the WEDM performance while machining MMCs.



**IMPLEMENTATION OF ADVANCED CARRIER TRACKING ALGORITHM USING ADAPTIVE-  
EXTENDED KALMAN FILTER FOR GNSS RECEIVERS**

**Paper ID-1025**

**A paper presented by: Harsha P.B.S., Ratnam D.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India**

**Abstract:**

Use of Global Navigation Satellite Systems (GNSS) receivers for real-time applications has improved significantly all over the world. The main problem with the designed receivers is their failure to function under harsh environmental conditions because of the structured phase-locked loop (PLL) architecture. One of the most critical phenomena that cause signal degradation in GNSS receiver is ionospheric scintillations, which create disturbances in amplitude and phase of the received signal. The problem in signal acquisition and tracking, even in the severe canonical fades (deep amplitude fading correlated with reference to half cycle phase jumps), can be mitigated using robust and adaptive carrier tracking algorithms. The autoregressive exogenous modeling parameters are useful in estimating the amplitude and phase scintillations. The proposed adaptive-extended Kalman filter (AEKF) approach works as an effective carrier tracking algorithm maintaining a balance in dual problems faced by PLL-based receivers, i.e., (estimation versus mitigation) and (dynamics versus noise reduction) tradeoff. The developed AEKF algorithm performed well for synthetic Cornell scintillation monitor data and for Global Positioning System L1 PRN 12 data collected around 21.30 H (local time) on October 24, 2012, in Rio de Janeiro, Brazil, with GNSS Software Navigation Receiver.

**COMPACT UWB MIMO SLOT ANTENNA WITH DEFECTED GROUND STRUCTURE**

**Paper ID-1026**

**A paper presented by:** Rao J.C., Rao N.V., Madhav B.T.P., Vasavi V., Vyshnavi K., Yadav G.S.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A compact ultra wideband (UWB) multiple-input multiple-output (MIMO) slot antenna having a size of 22 Å—34 mm<sup>2</sup> is proposed for portable device applications. The proposed MIMO antenna consists of two symmetric UWB slot antennas with microstrip-fed placed on the one side of dielectric substrate. To enhance the isolation between the antenna elements, two rectangular slots along with a ground stub are etched on the ground plane, which is on the other side of dielectric substrate. The proposed antenna exhibits a good 2:1 VSWR impedance bandwidth over the entire UWB band from 3.1-10.6 GHz with low mutual coupling less than -20dB, peak gain of 4.3 dBi and efficiency of more than 80%. The measured results are in good agreement with the simulation results and results show that the proposed antenna is good candidate for portable UWB applications.

**TASK SCHEDULING FOR REAL TIME APPLICATIONS USING MEAN-DIFFERENCE ROUND  
ROBIN (MDRR) ALGORITHM WITH DYNAMIC TIME SLICE (MDDRWDTS)**

**Paper ID-1027**

**A paper presented by:** Siva Nageswara Rao G., Srinivasu S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper proposes a CPU Scheduling algorithm, which is meant for optimizing CPU scheduling for real time applications. It is a new approach, which uses the concept of Mean Difference Round Robin (MDRR) with dynamic time quantum, whose value changes for each cycle. It acts better than RR and Mean Difference Round Robin (MDRR) Algorithm in terms of reducing the number of context switches, average waiting time and average turnaround time. The experimental results of the proposed algorithm have been compared with Mean-Difference Round Robin (MDRR) Algorithm is found to have produced optimum scheduling.

**APPLICATION OF A DATA MINING TASK CALLED DATA PREPROCESSING ON THE INPUT  
DATA AND EFFICIENT EXTERNAL SORTING USING REFINEMENT OF EXISTING  
ALGORITHM**

**Paper ID-1028**

**A paper presented by;** Hrushikesava Raju S., Nagabhusana Rao M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper presents external sorting using data preprocessing. Generally, huge data of any organization possess data redundancy, noise and data inconsistency. To eliminate, Data preprocessing should be performed on raw data, then sorting technique is applied on it. Data preprocessing includes many methods such as data cleaning, data integration, data transformation and data reduction. Depending on the complexity of given data, these methods are taken and applied on raw data in order to produce quality of data. Then, external sorting is applied.

**APPLICATION OF DATA PREPROCESSING ON THE GIVEN DATA AND EFFICIENT  
CONSTRUCTION OF OPTIMAL BINARY SEARCH TREES USING POST DYNAMIC  
PROGRAMMING**

**Paper ID-1029**

**A paper presented by:** Hrushikesava Raju S., Nagabhusana Rao M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

There are various methods of handling Optimal Binary search trees in order to improve the performance. One of the methods is Dynamic programming which incurs  $O(n^3)$  time complexity to store involved computations in a table. The data mining technique called Data Preprocessing is used to remove noise early in the data and enhance consistency of given data. The data postcomputing (opposite to Data Preprocessing) is applied using dynamic programming principle which starts with only required data and computes only the necessary attributes required to construct Optimal Binary Search Tree with time complexity  $O(n)$  if there are  $n$  identifiers / integers / any complex objects. This approach avoids computing all table attributes. Hence, the complexity or cost of Data post computing using Dynamic Programming is proved to be less than  $O(n^3)$  or even less than specified in some cases with experimental results.

**PATTERN MATCHING USING DATA PREPROCESSING WITH THE HELP OF ONE TIME LOOK  
INDEXING METHOD**

**PAPER ID-1030**

**A paper presented by;** Hrushikesava Raju S., Nagabhusana Rao M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

There are various pattern matching algorithms which take more comparisons in finding a given pattern in the text and are static and restrictive. In order to search pattern or substring of a pattern in the text with less number of comparisons, a general data mining technique is used called data preprocessing which named as D-PM using DP with help of one time look indexing method. The D-PM using DP finds given pattern or substring of given pattern in the text in less time and the time complexity involved is less than existing pattern matching algorithms. The new Pattern Matching Algorithm with data preprocessing (D-PM using DP) proposes Pattern Matching with dynamic search behavior and makes users should have flexibility in searching.

**A STATISTICAL APPROACH FOR SKIN COLOUR SEGMENTATION USING HIERARCHICAL  
CLUSTERING**

**Paper ID-1031**

**A paper presented by: Jagadesh B.N., Murty A.V.S.N.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Skin color segmentation plays a vital role in different applications such as Face Detection, Face Recognition and Human Computer Interaction applications. To improve the accuracy of skin colour segmentation system, in this paper a novel and new skin colour segmentation algorithm is proposed based on statistical approach under HSI colour space of the image. The bivariate feature vector of the image is to be model with a Pearson type II  $\hat{I} \pm \hat{I}$  mixture (bivariate Beta mixture) model. The model parameters are estimated using EM Algorithm. The initialization of parameters is done through Hierarchical Clustering and moment method of estimation. The performance of the proposed skin colour segmentation algorithm is studied by computing the image segmentation quality metrics (PRI, VOI and GCE) and comparing them with that of bivariate Gaussian mixture model. The ROC curves plotted for the system also revealed that the proposed algorithm can segment the skin colour more effectively than the existing segmentation algorithm for classifying skin colour.

**HIGH BANDWIDTH CIRCULARLY POLARIZED X-SLOT ANTENNA**

**Paper ID-1032**

**A paper presented by:** Sai Krishna V., Pardhasaradhi P., Madhav B.T.P., Giridhar M.V., Reddiah Babu M.V.,  
Krishna G.V., Mohan Reddy S.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper, a circularly polarized monopole antenna with L-shaped strip on the ground structure is presented for wideband applications. The proposed antenna has total dimension of  $40 \text{ \AA} \times 40 \text{ \AA} \times 1.6 \text{ mm}^3$ , designed on FR4 substrate with dielectric constant 4.4. A bandwidth of almost 14GHz and peak gain of 4.5dB are attained from the proposed antenna model. By using frequency selective surface beneath the antenna at an optimum distance, enhancement in the gain is achieved. An axial ratio less than 3dB conforms the circular polarization in the desired operating band.



**INTRUSION DETECTION SYSTEM IN MANETS WITH ELGAMAL DIGITAL SIGNATURE**

**Paper ID-1033**

**A paper presented by:** Spurthi K., Tammireddy S., Patro S., Shankar T.N., Swain G., Senapati R.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In MANET, intrusion detection system is unable to notice the malicious attacks by watchdog scheme. It leads to be an inferior performance of a network. This paper describes intrusion detection system on MANETs with the collaboration of three IDS approaches. The ElGamal digital signature scheme in AOMDV to detect the forge acknowledgment packets is being introduced as a best and suitable scheme with the better throughput and less routing overhead.

**VARIABLE LIMITS AND CONTROL CHARTS BASED ON THE HALF NORMAL DISTRIBUTION**

**Paper ID-1034**

**A paper presented by: Srinivasa Rao B., Srinivasa Kumar C., Rosaiah K.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The well-known variable control charts for mean and range of sub-groups for the half normal distribution were constructed by three different approaches. One from the first principles of using percentiles of the sampling distribution of the sample mean and sample range, the second from Shewhart control limits, and the third approach was a skewness correction procedure depending on the skewness coefficient. The coverage probabilities of the three different approaches were computed through simulation and compared.

**RANDOM VIBRATION ANALYSIS OF MECHANICAL HARDWARE OF FLIGHT DATA  
RECORDER**

**Paper ID-1035**

**A paper presented by:** Navuri K., Eswara Kumar A., Mani P.B., Krishna B.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Flight data recorder (FDR) is an electronic device installed in the aircrafts for the purpose of investigation of the accidents. FDR is an assembly of both mechanical and electronic components. It is necessary to design the FDR with high strength and stiffness for both static and dynamic loads to avoid the failure when accidents or crash of the flights occur. Typically the parts of the FDR will be manufactured by both metals and non-metals. The parts of the FDR are experienced by different types of loads like harmonic, random, and shock vibration loads. High deformations and stresses will be developed during these loads and internal collisions of parts can take place and then leads to individual part or assembly failure. So it is very important to analyse the response of the FDR subjected to these loads. In the present work, FDR is analysed under random vibration loads in the form of base acceleration in X, Y and Z directions by using finite element simulation software Ansys Workbench. The parts and assembly are modelled in Ansys workbench. The response of the structure is analysed for with and without rib FDR cases. Later the best case is analysed with composite materials. Carbon epoxy and E-glass epoxy 3-D composite materials are chosen to perform the analysis. Proper boundary conditions, mesh and contacts between parts are assigned to the FDR assembly. It is observed that FDR shown better stiffness with ribs for all directional random vibration loads than without ribs. The deformations in FDR with ribs and without ribs are found to be within the limits of clearance available. Hence there is no risk of collision between the parts. It is observed that there is 28.26% of weight reduction in carbon epoxy composite FDR compared to the typical FDR with ribs.

**ACTIVE SITE CAVITIES IDENTIFICATION OF AMYLOID BETA PRECURSOR PROTEIN:  
ALZHEIMER DISEASE STUDY**

**Paper ID-1036**

**A paper presented by:** Rajarajeswari P., Viswanadha Raju S., Amira Ashour A., Dey N., Balas V.E.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Alzheimer and Parkinson diseases are the major cases of neuro degenerative diseases. The Alzheimer disease pathogenesis is highly complex. Although, various pathologies characterize this disease, amyloid plaques are the hallmark neuropathological lesions in Alzheimer's disease brain. Active site prediction of Amyloid beta (A4) precursor protein (APP) is done to identify the locations of ligand binding sites as well as to predict functional similarities between cavities. This information can be used further to estimate the bound ligands' locations. Mis-folding of APP protein can lead to its aggregation, involving a process in which monomers interact to form dimers, oligomers, and eventually insoluble fibrillar deposits. Alzheimer disease is associated with senile plaques and neurofibrillary tangles (NFTs). The Amyloid-beta (Abeta) is a major component of senile plaques that has various pathological effects on cell and organelle function. In the proposed approach, an active site of the APP is obtained by using active site prediction server.

**OPTICAL FLOW HAND TRACKING AND ACTIVE CONTOUR HAND SHAPE FEATURES FOR  
CONTINUOUS SIGN LANGUAGE RECOGNITION WITH ARTIFICIAL NEURAL NETWORKS**

**Paper ID-1037**

**A paper presented by:** Kishore P.V.V., Prasad M.V.D., Kumar D.A., Sastry A.S.C.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

To extract hand tracks and hand shape features from continuous sign language videos for gesture classification using backpropagation neural network. Horn Schunck optical flow (HSOF) extracts tracking features and Active Contours (AC) extract shape features. A feature matrix characterizes the signs in continuous sign videos. A neural network object with backpropagation training algorithm classifies the signs into various words sequences in digital format. Digital word sequences are translated into text with matching and the suiting text is voice translated using windows application programmable interface (Win-API). Ten signers, each doing sentences having 30 words long tests the performance of the algorithm by computing word matching score (WMS). The WMS is varying between 88 and 91 percent when executed on different cross platforms on various processors such as Windows8 with Inteli3, Windows8.1 with inteli3 and windows10 with inteli3 running MATLAB13(a).

**CLOUD BASED BIG DATA ANALYTICS A REVIEW**

**Paper ID-1038**

**A paper presented by: Manekar A.K., Pradeepini G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India**

**Abstract:**

Today's computing world is facing tsunami and driving without riding on this tsunami towards next generation computing is no choice. So many IT companies decided to grow up with this tsunami like technology. One of these is cloud computing and another is Big data. Currently more than 5 billion mobile users and nearly same facebook and other social media user generate this tsunami of data. On another side to deliver this services of big data a model called as cloud computing is spreading everywhere as next generations IT Service model. Both technologies continue to evolve. Ultimately as a cloud computing development matures, every top mind of organizations will think for development of efficient and agile cloud environment. At the other side every cloud provider offers the services to the huge number data processing companies that generate data process data and make decision on cloud infrastructure. Ultimately its today's need to think on futures efficient cloud based Big data analytics In this review paper we are focusing on, how we can club Big data and cloud Computing in one frame of development.

**UNIQUE CONSTRAINT FREQUENT ITEM SET MINING**

**Paper ID-1039**

**A paper presented by:** Greeshma L., Pradeepini G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Itemset mining identifies group of frequent itemsets that signify possibly of relevant information. Unique constraints are usually forced to emphasis the analysis on most interestingness itemsets. In this paper we proposed unique constraint based mining on relational dataset. The constrained-based mining helps us to merge all itemsets, which are interrelated to each other. Specifically it chooses itemsets with same consequent part of an association rule and evaluates the highest itemsets with minimum coverage in that relational database. This paper mainly concentrates to propose a new Apriori-based algorithm, which satisfy the certain properties of constrained itemset based mining like anti-monotonicity.

**A NOVEL IMAGE ENCRYPTION TECHNIQUE USING RGB PIXEL DISPLACEMENT FOR  
COLOR IMAGES**

**Paper ID-1040**

**A paper presented by:** Somaraj S., Hussain M.A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In the present scenario when all data is in network, cloud or some data center, security and protection of data is a major concern. Encryption is one of the techniques used for this purpose. Image encryption is applied for protecting images from different kinds of attacks. Image Encryption is possible by a kind of transposition in color images or 3D images by displacing the rgb components of the color image. This paper presents a method for encryption and decryption of Color images using RGB pixel displacement. In the proposed method the original plain image is split into its basic three components, that is the RGB components and the key image is also split into RGB Components. Further by application of XOR operation and scrambling of the three components the cipher image is generated. This method is suitable for encrypting 3D images. The algorithm is implemented in MATLAB environment and tested on various color images.



**MICROANEURYSMS EXTRACTION WITH VESSEL NEIGHBORHOOD SEPARATION, SVM, AND  
CONNECTED COMPONENT EXTRACTION**

**Paper ID-1041**

**A paper presented by:** Reddy S.S., Prakash K.N., Kishore P.V.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Diabetic retinopathy is an important branch of ophthalmology. Non - proliferative diabetic retinopathy is used to detect Microaneurysms in the early stage. Microaneurysms are verified through fundus images, where in the fine red-dots near the blood vessels confirm this defect. Conventional methods and their weak resolution seldom can identify to such accuracies. In this work, we present a procedure to identify Microaneurysms with higher accuracy. The retinal vessels are extracted, from collected fundus image, using a Gabor wavelet which delivers high accuracy output. For accurate analysis the image it is sub divided into two regions, neighborhood and non-vessel neighborhood for expediting support vector machine (SVM) analysis. Further the SVM engine is trained for positive and negative samples of identified region fundus images. Then by sliding window technique, the entire test image is analyzed limiting analysis by SVM engine for near vessel region. This improves overall performance of the analysis and permits time available for a deeper/ sensitivity analysis of near vessel areas. The logic and the code has been tested on sample images and the results have been satisfactory.

**PARAMETRIC STUDIES ON MOTION INTENSITY FACTORS IN A ROBOTIC WELDING USING  
SPEECH RECOGNITION**

**Paper ID-1042**

**A paper presented by:** Kumar A.S., Mallikarjuna K., Krishna A.B., Prasad P.V.R.D., Raju M.S.V.S.B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The manufacturing strategies have been modernised and became autonomous by using robotic control and voice control system. Factors analysed for effectiveness of the present system for the application of welding. Pre operational setups, control variables for welding process are used in the motion of the robot. Robots are considerably complicated electromechanical system with mutual interactions of robot mechanics and drives. The parametric studies are performed for the motion of the welding robot. The virtual prototype modelling and optimization of a 6 DOF robot developed using solid works, MATLAB and simmechanics. The voice control technology is implemented for controlling robot. This paper presents the kinematic solution in simmechanics and modelling of complex mechatronic systems. Using similar robot prototype and it is possible to get the optimized controller for the actual robot. Speech recognition system is used starting and appear in standard software applications. The present problem is integration of graphical user interfaces with speech process. A prototype model developed for studying integration of speech dialogue into graphical interfaces designed to programming of industrial robot arms in this paper. The aim of the prototype is to develop a speech dialogue system for solving simple relocation tasks in a robot work cell using ABB IRB 1410 industrial robot arm.

**IMPLEMENTATION AND RECONFIGURATION OF BASIC DIGITAL MODULATION DESIGN  
MODELS**

**Paper ID-1043**

**A paper presented by: Prasad B.K.V., Sai Priya R.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In modern communication systems the independent modulation and demodulation techniques is done using proper signal detection schemes and prominent receiver structure. The implementation of BPSK, FSK, ASK modulation and demodulation techniques are design using Simulink in system generator module which is transferred into Xilinx core and undergoes changes using system generator module. The modulated signals obtained from these simulations are analogized with the obtained signals after interfacing and programmed using an FPGA. The FPGA was programmed with the help of ARM processor to compile the bit files to select the required modulation based on our requirement that has best channel support. The interface is done between the controller and spartran-3e FPGA using JTAG. The XSVF format and synopsis programmed files are stored in the SD-card of the microcontroller. The HyperTerminal displays the output corresponding to the selected modulation. The optimum modulation is selected based on available bandwidth, bit-error-rate and signal to noise ratio. Hence, Among available tools for FPGA design, System Generator is a system-level modeling tool that provides, system complexity, power efficiency, better quality of service, bandwidth efficiency and, more secure, cost effectiveness, reliable and efficient compared to the analog communication.

**A PRACTICAL APPROACH TO E-MAIL SPAM FILTERS TO PROTECT DATA FROM  
ADVANCED PERSISTENT THREAT**

**Paper ID-1044**

**A paper presented by:** Chandra J.V., Challa N., Pasupuleti S.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Time based Self-destructing email mainly aims at protecting data privacy. In this paper we discussed the spear phishing process as a part of advanced persistent threat attack which gathers information and targets an individual or organization. It implements of social engineering techniques to gather data regarding recipient. Malicious emails are sent by combining the psychological and technical tricks, where phishing emails contains web-links that provoke the recipient to click on them, these links contains websites that are infected with malware. We also concentrated on Spam Emails and Targeted Malicious E-mails. In this paper we discussed recipient side detection techniques, such as spam or Junk mail filters using mathematical concept of Bayesian spam filtering. We contribute a clear indication of behavioral structure of Advanced Persistent Threat and a self-destructive mechanism is adopted as Defense System to protect sensitive confidential data from intruders. A mathematical approach is given along with the computational practical analysis and experimental result.

**PREPARATION AND CHARACTERIZATION OF PAN-KI COMPLEXED GEL POLYMER  
ELECTROLYTES FOR SOLID-STATE BATTERY APPLICATIONS**

**Paper ID-1045**

**A paper presented by:** Krishna Jyothi N., Venkataratnam K.K., Narayana Murty P., Vijaya Kumar K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The free standing and dimensionally stable gel polymer electrolyte films of polyacrylonitrile (PAN): potassium iodide (KI) of different compositions, using ethylene carbonate as a plasticizer and dimethyl formamide as solvent, are prepared by adopting 'solution casting technique' and these films are examined for their conductivities. The structural, miscibility and the chemical rapport between PAN and KI are investigated using X-ray diffraction, Fourier transform infrared spectroscopy and differential scanning calorimetry methods. The conductivity is enhanced with the increase in KI concentration and temperature. The conductivity-temperature dependence of these polymer electrolyte films obeys Arrhenius behaviour with activation energy ranging from 0.358 to 0.478 eV. The conducting carriers of charge transport in these polymer electrolyte films are identified by Wagner's polarization technique and it is found that the charge transport is predominantly due to ions. The better conducting sample is used to fabricate the battery with configuration K/PAN + KI/I<sub>2</sub>+ C + electrolyte and good discharge characteristics of battery are observed.

**INDIAN SIGN LANGUAGE RECOGNITION: A COMPARISON BETWEEN ANN AND FIS**

**Paper ID-1046**

**A paper presented by;** Anil Kumar D., Kishore P.V.V., Venkatram N., Leela Rani B., Hasitha A., Sabarish T.V.N.S.H., Sai Chandra R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The focus of this paper is to compare two artificial intelligent paradigms for gesture recognition from videos of Indian sign language with artless backgrounds. Hand and Head segmentation giving rise to shape features for the entire video sequence is inputted to Artificial Neural Networks (ANN) and Fuzzy Inference Engine (FIS). Chan Vase active contour extracts shape models for the classifier. Two classifiers are inputted with same set of training and testing samples. The classifiers are compared based on their data handling measured using recognition rate and execution times measured by training and testing times. The results indicate a trade off between training data size and execution times of ANN and FIS. The classifiers were tested on 86 gestures from 10 different signers.

**FPGA BASED WIRELESS ELECTRONIC SECURITY SYSTEM WITH SENSOR INTERFACE  
THROUGH GSM**

**Paper ID-1047**

**A paper presented by:** Murali Krishna B., Rakesh Chowdary G., Chandra Vardhan G., Siva Ram K., Sai Kishore P., Madhumati G.L., Khan H.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The advanced improvement of current technology innovation and Cell phone, keen method for living has ended up being a noteworthy part in the present period of human life. Tremendous growth in wireless communication has enabled the researchers to use wireless portable personal devices such as Wi-Fi-UART, ESP8266 (IOT), Bluetooth, ZigBee, GSM, GPRS, data card and other wireless sensor networks to append with custom applications to control remote appliances. In this paper we propose a wireless electronic security system with touch sensor interface through GSM. It is applicable to banks, schools, colleges, home and industrial appliances. Home mechanization, which is controlled by utilizing Android advanced cell. The home apparatuses that have to control is associated with relays connected with GPIO ports of the FPGA board which are activated and deactivated through commands in serial communication (UART) from cell. Status of the appliances sent via SMS through GSM SIM 900A module to a predefined numbers programmed in system. The primary target of home computerization is to help impeded and old matured individuals that will empower them to control home apparatuses and caution them in some quick circumstances accordingly. Design is synthesized on Xilinx Platform Studio (XPS)-Embedded Development Kit (EDK) and implemented on Spartan-3E FPGA.

**DYNAMIC ACCESS CONTROL POLICIES IN SECURE OUR SOURCED DATA IN CLOUD  
STORAGE**

**Paper ID-1048**

**A paper presented by:** Sampath S., Tirapathi Reddy B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Cloud computing has emerged as maximum influential parameter in actual time IT enterprise in recent 12 Month's configuration for with appropriate occasions in allotted computing. Out sourced backup data in Third birthday celebration cloud storage is a successful service to reduce statistics management costs and security concerns of integrity records of cloud statistics garage. Historically layout FADE (policy primarily based document assured Deletion), is a practical deployable of cloud garage machine in covered cloud facts. FADE is built upon trendy cryptographic techniques with outsourced facts in cloud storage system. FADE be afflicted by inflexibility in get entry to manipulate of out sourced data. As a way to recognize scalable and flexible with find grained get admission to manage in cloud computing. So on this paper we advise to develop Hierarchical attribute based Encryption (HASBE) by using extending cypertext guidelines with hierarchical shape of users. We enforce our software in each green and flexible in handling get entry to control in out sourced records in cloud computing with complete applications and experiments. Our experimental results display efficient get entry to control in consumer revocation and grant permission in real time evaluation of processing cloud packages.



**HBASE BULK LOADING JOB SCHEDULER FOR MULTI USER ACCESSIBILITY**

**Paper ID-1049**

**A paper presented by: Likhitha S., Rao D.R.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

While the utilization of Map Reduce methods, (for example, Hadoop) for broad data research has been normally known and investigated, we have of late seen an impact in the quantity of strategies made for thinking data giving. These more recent techniques deal with "cloud OLTP" programs, though they typically do not support ACID dealings. HBase is an open-source distributed NoSQL store that is commonly used by many Internet businesses to manage their big information processing programs (e.g. Face book or MySpace manages an incredible number of information each day with HBase). Optimizations that can improve the efficiency of HBase are of vital passions for big information programs that use HBase or Big Table like key-value shops. In this document we research the problems natural in mis-configuration of HBase groups, such as circumstances where the HBase standard options can lead to inadequate efficiency. We create HConfig, a semi automated settings administrator for improving HBase system efficiency from several measurements. Due to the space restriction, this document will concentrate on how to improve the efficiency of HBase information loading machine using HConfig. Through this research we believe that the significance of source flexible and amount of work aware auto-configuration management and the design concepts of HConfig. Our trial results show effective group map decreasing in information research in database integration.

**DETECTION OF BLACKHOLE & GREYHOLE ATTACKS IN MANETS BASED ON  
ACKNOWLEDGEMENT BASED APPROACH**

**Paper ID-1050**

**A paper presented by:** Chaitanya K., Venkateswarlu S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract**

A MANET is a choice of flexible locations that are gradually and randomly organized in the interconnections between locations are prepared for modifying on stable organization. Because of security disadvantages of the redirecting techniques, Wi-Fi ad-hoc frameworks are unprotected to attacks of the risky locations. Normally suggest AODV strategy for black hole recommendation in Wi-Fi suggestion frameworks. However, because of the open framework and hardly to be had battery-primarily based power, node misbehaviors may also be available. One such redirecting bad behavior is that some self-centered nodes will take part in the route finding and servicing techniques however reject to ahead information packages. In this document, we suggest the 2ACK plan that provides as an add-on strategy for redirecting techniques to identify redirecting bad behavior and to minimize their adverse impact. The simulated results may achieve effective efficiency in suggested schema.

**FUZZY ORIENTED RISK ASSESSMENT IN ENTERPRISE INFORMATION SYSTEMS  
Paper ID-1051**

**A paper presented by:** Bharat G.M., Prasad M.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Records in corporation infrastructure is greater complex and face a troubles with threat in employer property increasing workload performance in real time packages. therefore evaluation of the process identity, and mitigation of records protection in agency applications may obtain promising concept in facts security. Traditionally Quantitative statistics protection analysis method proposed for business enterprise packages in real time facts safety. Specific technique identifies the chance-vulnerability pair liable for a threat and computes a chance element similar to every protection property for each asset. Because of this an assault on one asset can be propagated through the network and threaten an organization's maximum valuable belongings. Linguistic terms are used by the experts to represent assets values, dependencies and frequency and asset degradation associated with feasible threats. Computations are based totally on the trapezoidal fuzzy numbers associated with these linguistic terms.

**REAL TIME SCHEDULING FOR DYNAMIC PROCESS EXECUTION USING ROUND ROBIN  
SWITCHING**

**Paper ID-1052**

**A paper presented by: Siva Nageswara Rao G.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Scheduling in operating systems is allocate certain amount of CPU time with use of different processes. Task scheduling is also one of the key process in running of different processors in with in life time. Round Robin (RR) is a popular scheduling algorithm allows to utilize the CPU short time for individual task scheduling events in real time process execution. The advancement of RR scheduling performs fine tuning for time slice which do not stipulated time to allocate them in events proceedings based on CPU scheduling. RR also maintains turnaround time, waiting time and response time with processing frequency of context switches. In this paper we improve the performance of RR with integer programming to refine in arrival time analysis in process scheduling with proceedings of all the requirement CPU processes. Every process has reasonable response and arrival time analysis in allocation of scheduling in process allocation. A method the usage of integer programming has been proposed to resolve equations that determine Changeable Time Quantum (CTQ) value that is neither too massive nor too small such that each system has reasonable response time and the throughput of the system is not decreased because of unnecessarily context switches.

**ANALYSIS AND SIMULATION OF ZCS CURRENT-FED FULL BRIDGE HIGH GAIN DC-DC  
CONVERTER WITH SYNCHRONOUS RECTIFICATION**

**Paper ID-1053**

**A paper presented by:** Reddy M.S.K., Elangovan D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper presents steady-state analysis and simulation of full bridge current fed dc-dc converter with Synchronous rectification. This converter is best suited for Grid connected Fuel Cell applications. Synchronous rectifier circuit with voltage doubler was implemented on the secondary side of H/F isolation Transformer. Secondary modulation technique helps in reducing blocking voltage spike of the primary side switches at low value. The proposed converter topology ensures Zero Current Switching (ZCS) on primary side and Zero Voltage Switching (ZVS) on secondary side of H/F isolation transformer. Primary devices clamped at low voltage, which intends to use power MOSFET's with low ON-state resistance values we can go with less conduction losses moreover all power switches ensuring soft switching which will reduce the switching losses there by the converter efficiency will improve. The proposed converter is analyzed and simulated for 250W with an input voltage of 12V and the output voltage is modulated using duty cycle from 150V-300V.

**MATHEMATICAL MODELLING AND ANALYSIS OF GENERALISED INTERLINE POWER  
FLOW CONTROLLER: AN EFFECT OF CONVERTER LOCATION**

**Paper ID-1054**

**A paper presented by; Reddy M.B., Obulesh Y.P., Sivanagaraju S., Suresh C.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India**

**Abstract:**

In this paper, a detailed power injection modelling and analysis of one of the latest Convertible Static Controllers namely, Generalised Interline Power Flow Controller is presented. This model is incorporated in the conventional Newton-Raphson load flow to analyze the effect of the device on system parameters. The effect of series and shunt converters' location is identified by placing the device either at respective sending ends or receiving ends of the transmission lines. The effect of device and its location is analysed on standard IEEE-30 bus test system.

**A NOVEL APPROACH FOR ERROR DETECTION AND CORRECTION USING PREFIX-ADDERS**

**Paper ID-1055**

**A paper presented by:** Naga Jyothi B., Murthy K.S.N., Srinivasarao K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The variable latency speculative Han-Carlson adder is a newly proposed adder to perform high speed arithmetic operations. Han-Carlson adder gives accurate results with error detection when compared to other adders like Kogge-Stone adder. In this paper, number of parallel prefix adders can be sub divided into number of stages and perform arithmetic operations. By using the Xilinx 14.2 software, the design of Kogge-Stone adder and Han-Carlson adder is developed. This paper focuses on the implementation and simulation of 8-bit, 16-bit Kogge-stone adder and Han-Carlson adder based on Verilog code and compared for their performance in Xilinx. When compared to other adders the delay performance for Han Carlson adder is less and it reduces the complexity. It is concluded that the proposed adder is better in terms of computational delay. By using Brent-Kung and Kogge-stone adder the parallel prefix Han-Carlson adder also be proposed.

**EXPERIMENTAL ANALYSIS OF SOLAR PANEL EFFICIENCY WITH DIFFERENT MODES OF  
COOLING**

**Paper ID-1056**

**A paper presented by:** Koteswararao B., Radha Krishna K., Vijay P., Raja Surya N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The new capital area of andhrapradesh having huge power demand. We can meet up to certain requirement throughout the year by using renewable energy resources like solar energy. Because this is the place where the sun intensity available much more. Our paper gives better utilization methods of sun energy through these methods. Even though we are having plenty amount of solar energy availability but we are unable to utilize solar energy effectively due to temperature variation from time to time. We can maintain constant power generation by the help of cooling. Our paper suggests the best cooling method for solar PVC panels among two cooling methods that is water and air. In water cooling cross flow and parallel flow used. Thermal sensor automatically switches on the motor after reaching panel over heat. The efficiency of the panel and Fill Factor measured in all the conditions.



**EMPIRICAL MODE DECOMPOSITION APPROACH FOR DEFECT DETECTION IN NON-  
STATIONARY THERMAL WAVE IMAGING**

**Paper ID-1057**

**A paper presented by:** Subhani S.K., Suresh B., Ghali V.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper introduces a novel empirical mode decomposition based anomaly detection in Quadratic frequency modulated thermal wave imaging. Being suited for non-stationary signal analysis, its edge over other contemporary processing modalities in its anomaly detection capability has been verified using experimentation carried over a mild steel specimen with embedded flat bottom holes. It also addresses the effect of size and depth on anomaly detection using the proposed methodology in addition to considering the signal to noise ratio of defects for detection.

**IPHDBCMM: INSPIRED PSEUDO HYBRID DNA BASED CRYPTOGRAPHIC MECHANISM TO  
PREVENT AGAINST COLLABRATIVE BLACK HOLE ATTACK IN WIRELESS AD HOC  
NETWORKS**

**Paper ID-1058**

**A paper presented by:** Babu E.S., Nagaraju C., Prasad M.H.M.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Secure communication is one of the basic requirements for any network standard. Particularly, cryptographic algorithms have gained more popularity to protect the communication in a hostile environment. As the critical information that is being transferred over the wireless adhoc networks can be easily acquired and is vulnerable to many security attacks. However, several security communication threats had been detected and defended using conventional symmetric and asymmetric cryptographic mechanism, which are too difficult and resource consuming for such mobile adhoc networks. Recently, one of the severe security threats that have to be detected and defend in any type of network topology is blackhole attack and cooperative blackhole. Because of its severity, the black hole attack has attracted a great deal of attention in the research community. Comprehensively the results of the existing system conclude that the black hole attack on various mobile adhoc networks is hard to detect and easy to implement. This paper addresses to detect and defend the blackhole attack and cooperative blackhole attack using hybrid DNA-based cryptography (HDC) mechanism. Moreover, the proposed method upsurge the security issue with the underlying AODV routing protocol. Eventually, This Hybrid DNA-based Cryptography (HDC) is one of the high potential candidates for advanced wireless ad hoc networks, which require less communication bandwidth and memory in comparison with other cryptographic systems. The simulation results of this proposed method provide better security and network performances as compared to existing schemes.

**FPGA (FIELD PROGRAMMABLE GATE ARRAY) CONTROLLED SOLAR BASED ZERO  
VOLTAGE AND ZERO CURRENT SWITCHING DC-DC CONVERTER FOR BATTERY STORAGE  
APPLICATIONS**

**Paper ID-1059**

**A paper presented by:** Prasad J.S., Obulesh Y.P., Babu C.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The objective of the paper is to develop a solar based soft switching isolated DC-DC converter for battery charging applications. The use of conventional boost converter is likely to decrease the efficiency because of hard switching, which generates loss during the switch on/off. But soft switching technique informs well with zero-current switching by the resonant inductor at turn-on, and zero-voltage switching by the resonant capacitor at turn-off. The major drawback of switched mode power converter operation is to produce EMI due to large  $dv/dt$  and  $di/dt$  during the time of switch mode operation. Therefore, to realize high switching frequencies in converters, the switching losses and EMI emission are reduced if each controlled switch in the converter is turn-on or turn-off only when current passing through and or voltage across the switch is zero. The FPGA (Field Programmable Gate Array) controlled DC-DC converter is used to provide zero voltage and zero current switching of all the main power devices. In this paper, the gate pulses are generated from FPGA (Field Programmable Gate Array) controller. This paper also describes the main operational modes of the converter as well as its simulation and Hardware results.

**SECURING DATA STORED IN CLOUDS USING MULTI KEYS AND PROXY INJECTION  
SCHEMES**

**Paper ID-1060**

**A paper presented by:** Girishma V., Satyanarayana K.V.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A new robust control scheme for Multi key distribution scheme that supports secured data storage and access in clouds along with anonymous upload feature to protect user privacy is proposed. User authenticity is established by the cloud through proper registration procedures and in turn data authenticity with multi key sharing authenticity and support for anonymous sharing is established by registered users. Access control is being implemented where the stored information can be decrypted by users who are valid. Replay attacks are prevented through Proxy injection based schemes and they are also helpful in containing Cloud Services Provider (CSP) from knowing where-about of uploader themselves. User revocation is addressed and creating, reading and modifying information in cloud is also supported.

**DESIGN OF SINGLE FEED CIRCULARLY POLARIZED HARMONIC SUPPRESSED MICRO  
STRIP PATCH ANTENNA FOR X-BAND APPLICATIONS**

**Paper ID-1061**

**A paper presented by:** Poorna Priya P., Khan H., Anusha C.H., Sai Tejaswi G., Siva Rama Krishna C.H.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Introduction of a symmetrical slot near feed point for a symmetrical radiation patch of micro strip patch antenna realize both circular polarization and higher order mode suppression. Simulated and experimental results shows that application of symmetrical slot near feed point for asymmetrical patch can remarkably suppress the harmonic frequencies. Measured return loss and VSWR results shows that the proposed antenna suppress the higher order harmonics by maintaining circular polarization in X-band applications.

**INDIAN SIGN LANGUAGE RECOGNITION SYSTEM USING NEW FUSION BASED EDGE  
OPERATOR**

**Paper ID-1062**

**A paper presented by:** Prasad M.V.D., Kishore P.V.V., Kiran Kumar E., Anil Kumar D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The objective is to generate a basis for sign language recognizer under simple backgrounds. Complications arise in extracting shapes of hands and head using traditional segmentation models due to non-uniform lighting. This paper proposes a wavelet based fusion of two weak edge detection models. One is morphological subtraction model and the other is gradient based canny edge operator. Elliptical Fourier descriptors provide shape models with optimized number of shape descriptors. Principle components determined keep the feature vector to a minimum to accommodate all the frames in the video sequence. Classification of the signs is achieved by training a neural network trained with back propagation algorithm. The proposed method is exclusively tested many times with different examples for correct recognition sequence. Finally, the recognition rate stands at 92.34% when compared to similar model using discrete cosine transform based features at 81.48%.

**A MACHINE LEARNING APPROACH FOR IDENTIFYING DISEASE TREATMENT RELATIONS  
IN SHORT TEXTS**

**Paper ID-1063**

**A paper presented by: Sairam T.V.M., Rama Krishna G.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The Machine learning (ML) region has proved its power in almost every industry and is currently a reliable technology in health care industry. Computerized study of the clinical industry includes suitable care choice guide, healthcare photo and DNA connections. ML is recognized as a tool employing computer systems integrating health care mechanisms resulting in more appropriate care and attention patients and further study or research on a disease. This paper provides powerful algorithms and techniques used in diagnosing illness using remedy associated phrases from brief published written text launched in healthcare documents. The objective of this work is to show how Natural Language Processing (NLP) and Machine Learning strategies can be used for reflection of information and what class strategies are appropriate for determining & figuring out suitable care information in brief published written textual content. This paper additionally focuses on suitable care analysis therapy & prevention of contamination, infection harm in human. The system found out some assignment of clinical suitable care statistics, healthcare control, and man or woman health data and so forth. The proposed method may be incorporated with any health-care management software to make better suitable care selection. The inpatient management application can instantly mine bio-medical data from virtual databases.

**EXTRACTION AND PROCESSING OF SITUATION SPATIOTEMPORAL TRAFFIC USING SVM  
ALGORITHM WITH BIG DATA**

**Paper ID-1064**

**A paper presented by:** Hema Latha S., Subrahmanyam K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

With the wide variety of motion sensors that traffic information can come from many research has been reserved for the development of traffic forecast, which in turn increases the shipping routes, traffic management, urban planning, etc. The most important challenge is to predict how traffic based on predictive models based on historical data traffic in real time, which may differ from historical data and change over time. In this system can learn new context of the current online traffic situation (or context) in real time, most effectively formed using a predictive historical data traffic model is intended to predict the future of the current situation. If traffic in real time, distributed environment enters the bloodstream space efficiently adapt to assess the effectiveness of each significant predictor different situations. We can show you the way, and short-term and long-term performance guarantees (STEP), our algorithm is designed in accordance with the algorithm works well in situations where there are no real signs (for ex. Traffic Ready) or later. We proposed an algorithm called "Extraction and Processing of situation Spatiotemporal traffic using SVM algorithm with Big data" • By using the proposed framework, a context in which the most important is to predict the traffic by monitoring the movement of vehicles, which can further reduce the complexity of the request and inform the trade-policy. Our experience with real data in real-time circumstances indicates that the proposed approach is superior to existing solutions.



**ERHR-EFFICIENT AND RELIABLE HETEROGENEOUS ROUTING PROTOCOL FOR SENSOR  
NETWORKS**

**Paper ID-1065**

**A paper presented by: Sai T.S.R., Vemuri S.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A WSN is a collection of various nodes having the capability to sense the information namely sensor nodes and organized over a distributed region, in that region all nodes are communicated with each other and forms the sensor network. The nodes of sensor network have limited communication interface, resources and computational resources. Moreover, sensor network are used in real life application. Mainly, each application requires different capabilities of sensor devices such as capability of sensing and range of propagation. Consequently, heterogeneous sensor networks are came into existence. Previously, various routing protocols are exist but most of them are concentrating on single issue. Those are data-centric, hierarchical, location based and quality of service. In this article we intend a new routing protocol it will address the heterogeneity of nodes and QOS issues. This protocol is implemented with NS2 and performance of the protocol is compared with standard sensor routing protocol AODV.

**DIAGNOSIS OF HEART DISEASE USING NEURAL NETWORKS-COMPARATIVE STUDY OF  
BAYESIAN REGULARIZATION WITH MULTIPLE REGRESSION MODEL**

**Paper ID-1066**

**A paper presented by:** Sai Krishnasree K., Narasinga Rao M.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Heart disease is one of the significant reasons of death and the progress of which is rampant all over the globe. Blood vessels carry blood with oxygen to all the cells in the body. It is a common reason that, Cholesterol and other substances can be deposited in blood vessels which block blood vessels and that no blood and oxygen can get to heart. This leads to heart disease. Several works have been made to predict the heart disease in different methods. The main aim of this paper is to predict heart disease using Multiple Regression and Bayesian Regularization methods and compare the results of these models. Multiple Regression is one of the strong model used for prediction and it shows the association between input variables and output variable. It predicts the output variable based on the relationship between one or more input variables and target variable. Bayesian regularization is a statistical model which process nonlinear dataset. It increases the generalization capability and decreases squared error. Bayesian regularization works on with large inputs efficiently. The results are calculated using Multiple Regression and Bayesian Regularization methods and predicted the heart disease. The results of Multiple Regression and Bayesian Regularization are compared and it is observed that the results generated from Bayesian Regularization are more accurate than multiple regression model.

**A DECISION SUPPORT SYSTEM FOR PREDICTING DIABETIC RETINOPATHY USING NEURAL NETWORKS**

**Paper ID-1067**

**A paper presented by:** Chandana K., Prasanth Y., Prabhu Das J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Diabetic retinopathy (DR) is an eye fixed ill complete by the impairment of polygenic disorder and that we purchased to acknowledge it before of calendar for sensible treatment. As polygenic disorder advances, the vision of a patient might begin to interrupt down and incite diabetic retinopathy. On these lines, 2 social occasions were perceived, specifically non-proliferative diabetic retinopathy (NPDR), proliferative diabetic retinopathy (PDR). During this paper, to dissect diabetic retinopathy, 3 models like Probabilistic Neural framework (PNN), Bayesian Classification and Support vector machine (SVM) square measure pictured and their displays square measure thought-about. The live of the unwellness unfold within the membrane are often recognized by analytic the elements of the membrane. The elements like veins, hemorrhages of NPDR image and exudates of PDR image square measure off from the unrefined photos victimization the icon prepare techniques, fed to the classifier for gathering. A complete of 350 structure photos were used, out of that 100 were used for designing and 250 pictures were used for testing. Exploratory results show that PNN has an accuracy of 89.6 % Bayes Classifier incorporates a exactness of 94.4% and SVM has an exactitude of 97.6%. This determines the SVM model beats one other model. What is more our system is equally continue running on 130 pictures open from "DIARETDB0: Evaluation Database and Procedure for Diabetic Retinopathy" and also the results show that PNN incorporates a exactness of 87.69% Bayes Classifier has an accuracy of 90.76% and SVM has a precision of 95.38%.

**PROTOTYPE DESIGN USING INTERNET OF THINGS FOR MOTION DETECTION IN SECURITY  
ROOMS**

**Paper ID-1068**

**A paper presented by:** Divya Shivani J.L., Senapati R.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Surveillance technique provides the capability of collecting exact and meaningful data and choosing appropriate decisions to optimize safety and security. In present surveillance technique, videos or images from any portable cameras or CCTV cameras are sent to a control centre, where actually all these huge amount of data is saved in database servers. Operators have to maintain and monitor these images or videos [1]. Mobile image surveillance represents a new paradigm that encompasses video acquisition on one side, and on the other side, especially at the same time image viewing and addresses both computerbased and mobile-based surveillance. [3] It is based on JPEG 2000 still image compression format. It is attractive because it supports flexible and progressive access to each individual image of the pre-stored content. It supports still image creation on the basis of motion detection technique which enables efficient utilization of resources.[3]It provides the software motion which enables the Pi's camera to detect motion and save the image as well as view live streaming from the camera. A python script, then directs the Pi to send email notifications every time when motion is detected. With these components, we designed a cost effective and efficient security camera system. The paper is concluded with concise summary and the future of surveillance systems for public safety.

**CHARACTERIZATION OF IONOSPHERIC VARIABILITY IN TEC USING EOF AND WAVELETS  
OVER LOW-LATITUDE GNSS STATIONS**

**Paper ID-1069**

**A paper presented by:** Kumar Dabbakuti J.R.K., Venkata Ratnam D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Investigation of ionospheric variability is essential for improving the daily ionospheric modeling and forecasting services of Global Navigation Satellite System (GNSS) applications. As India is a low-latitude region, more care has to be taken here to characterize the ionosphere due to irregularities and Equatorial Ionization Anomaly (EIA) conditions. Therefore, an appropriate method is required to diagnose the ionospheric variations during geomagnetic, solar and other disturbances. In this paper, the temporal ionospheric time delay variations were studied based on the Empirical Orthogonal Function (EOF) analysis and wavelet transforms (WT). These analyses were carried out with Total Electron Content (TEC) datasets obtained from three GNSS stations located in low-latitude regions. EOF analysis was performed on the TEC datasets, which were decomposed into a time series of orthogonal eigen values (or base functions) and associated coefficients. EOF base functions and their associated coefficients signify the hourly time variations and the day of the year variations. The results reveal that the first few EOFs represented the majority of TEC variability pertaining to the physical processes of the ionosphere. The accuracy of the EOF model was validated by the evaluation of observational TEC data with International Reference Ionosphere (IRI) 2012 models. The EOF model coefficients for each GNSS station showed a strong correlation with the IRI models and also described the correlation between the impacts of the level of geomagnetic activity on the ionosphere. The correlation coefficients for the first three EOFs were more than 0.95. The phase relationship of ionospheric TEC anomalies, with respect to the geomagnetic indices (Dst), were analyzed by wavelet transforms.

**LEAST-MEAN DIFFERENCE ROUND ROBIN (LMDRR) CPU SCHEDULING ALGORITHM  
Paper ID-1070**

**A paper presented by:** Rohith Roshan D., Subba Rao K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This article presents a variant of Round Robin Algorithm called Least Mean-Difference Round Robin (LMDRR) Algorithm. First, it calculates the mean of all processes burst times. Then it obtains the difference of each process burst time with the calculated mean. From those differences, it selects the least difference and assigns it to the CPU for executing it for a time slice. When the time slice is expired it suspends the process and checks the remaining burst time of the process if it is less than time quantum then it immediately executes the process, if the remaining time is greater than time quantum then it selects the process with next least difference and execute it for another time slice. This entire process will be repeated until all the processes in the ready queue are finished. The experimental results are compared with Round Robin and Mean-Difference Round Robin algorithms and found that proposed algorithm succeeded in improving CPU efficiency.

**BUILDING FAULT TOLERANCE WITHIN CLOUDS FOR PROVIDING UNINTERRUPTED  
SOFTWARE AS SERVICE**

**Paper ID-1071**

**A paper presented by:** Sushmitha S.L., Kamesh D.B.K., Sastry J.K.R., Sri Ravali V.V.N., Sai Krishna Reddy  
Y.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Use of clouds for availing various IT based services (Software, Platform, Infrastructure platform) has been in rampage. The way IT computing is done has been in radical change. However, many challenges are thrown when one needs to use the clouds for their IT computing. The challenges include security and privacy of the Information stored on the cloud and to provide continued services during the occurrence of the faults within the clouds. This paper addresses architectural framework for implementing fault tolerance at software as service.

**DUAL BAND NOTCHED PLANAR PRINTED ANTENNA WITH SERRATED DEFECTED GROUND  
STRUCTURE**

**Paper ID-1072**

**A paper presented by:** Bhavani K.V.L., Khan H., Sreenivasa Rao D., Madhav B.T.P., Rasagna Reddy V.,  
Monika M., Dhanush Chand Y.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A low profile printed antenna with defected ground structure (DGS) is presented in this work. Initially a square patch radiating element is constructed on one side of the substrate and the other end of the substrate is etched with serrated shape DGS. Three different iterations are examined in this work by changing the number of serrated edges on the ground plane. To improve the gain of the designed antenna models a frequency selective surface is placed beneath the antenna structure as a reflecting surface. The overall performance characteristics of the proposed antenna models are simulated using commercial electromagnetic tool HFSS. Optimized proposed antenna model is fabricated on FR4 substrate and measured results are compared with simulation results for validation.



**A SYSTEMATIC APPROACH TO CONTROLLING THE PROSTHETIC LEG USING AN EMG  
(ELECTROMYOGRAPHY)**

**Paper ID-1073**

**A paper presented by:** Kalyana Chakravarthy Y., Srinath A., Vijaya Aditya T., Abhiwed K.P.S.S.S, End G.,  
Ram N.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper proposes new methodology to build a system for control and actuation of a prosthetic leg. The method described in this paper involves online control of a prosthetic leg by analysing EMG (Electromyography) signal inputs from a normal leg and thereby actuating the prosthetic leg. The EMG (Electromyography) pulse inputs are taken from specific set of muscles in the leg to form a signal pattern library of active and inactive states of the muscles for every specific movement. During real-time operation the inputs from the normal leg is taken and actuation of motors is done by processing those input signals.

**A DFT STUDY ON THE ROLE OF LONG RANGE CORRELATION INTERACTION AND  
SOLVENT EFFECTS IN HOMOCHIRAL AND HETEROCHIRAL CYCLIC TRIMERIZATION OF  
IMIDAZOLE BASED HETEROCYCLIC AMINO ACIDS**

**Paper ID-1074**

**A paper presented by: Kumar N.V.S.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Using B3LYP and B97D functionals of density functional theory (DFT), homochiral and heterochiral cyclic trimerization of imidazole based heterocyclic amino acids are studied in gas phase and solvent phase, i. e., Acetonitrile. Both the functionals show that formation of homochiral cyclic tripeptide is thermodynamically and kinetically favorable over its heterochiral counterpart in gas phase. The functional, B97D, decreases the height of reaction barriers significantly compared to those predicted by the functional B3LYP. The reaction pathways explored using PCM implicit solvent model show reduced kinetic favorability for formation of the homochiral cyclic tripeptide over its heterochiral counterpart. The results are substantiated by structural aspects.

**IONOSPHERIC SPATIAL GRADIENT DETECTOR BASED ON GLRT USING GNSS  
OBSERVATIONS**

**Paper ID-1075**

**A paper presented by:** Raghunath S., Ratnam D.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A space-based augmentation system (SBAS) provides delay corrections to the Global Navigation Satellite System (GNSS) along with the residual error bounds falling within a high confidence interval. SBAS considerably improves the safety of an aircraft during flight even under all weather conditions. The dispersive nature of the ionosphere is the largest contributor of range error in GNSS, thus threatening its accuracy. Scrutiny of the ionospheric behavior over low latitudes is one of the most challenging tasks for any SBAS system. In this letter, an attempt has been made to detect the spatial gradients in the ionospheric vertical total electron content (VTEC), using statistical hypothesis tests, for the chosen probability of false alarm (Pfa) and probability of detection (Pd). Logarithm of likelihood ratio test (log LRT) and generalized likelihood ratio test (GLRT) were performed individually on GNSS data recorded by the multifrequency receiver at Koneru Lakshmaiah University, Guntur (GNT), Andhra Pradesh, India. The tests were performed on the data recorded on January 22, 2013, and March 17, 2013, which were geomagnetically quiet and disturbed days, respectively. The tests were validated by selectively introducing external noise in the VTEC and observing the outcomes. GLRT not only demonstrated a superior performance over log LRT, but it was also simpler to implement as it did not require any prior knowledge of the probability distribution of TEC values.

**A STATISTICAL APPROACH FOR SUBSURFACE ANALYSIS IN NONSTATIONARY THERMAL  
WAVE IMAGING**

**Paper ID-1076**

**A paper presented by:** Harsha Vardhan V., Raja Ram K., Naga Gopi K., Vijaya Lakshmi A., Subbarao G.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Infrared non-destructive testing makes use of captured surface temperature map over object surface to characterize subsurface features. This qualitative and quantitative analysis of subsurface anomalies widened the scope applicability due to its whole field, noncontact, non-invasive testing modality in addition to its suitability for testing of various materials. Augmented by the availability of various processing and testing methodologies it is gaining interest for surface and subsurface analysis. This paper introduces a qualitative methodology for subsurface analysis based on a classification using logistic regression and defect depth quantification using a linear regressive model developed for quadratic frequency modulated thermal wave imaging. The proposed methodology has been tested through experimentation carried over a carbon fiber reinforced plastic specimen with embedded flat bottom holes.

**ASSESSMENT OF DIABETIC RETINOPATHY GRADING BY THE IDENTIFICATION OF  
LESIONS IN OPTIC COLOR FUNDUS IMAGES USING CURVELET, THRESHOLDING AND SVM  
CLASSIFIER METHODS**

**Paper ID-1077**

**A paper presented by:** Bhargavi V.R.V., Senapati R.K., Bhavani S.Y., Prasad P.M.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Diabetes mellitus in people causes damage to vessels in eyes, kidneys, heart and nervous systems and diabetic retinopathy (DR) is an important hurdle in diabetic people and it causes lesion formation in retina. Bright lesions (BLs) are initial clinical sign of DR. Early BLs detection can help avoiding vision loss. The severity can be recognized based on number of BLs in the color fundus image. Manually diagnosing a large amount of images is time consuming. So a computerized DR grading and BLs detection system is proposed. For BLs detection, the optic disk (OD) and vessel structures are segmented and eliminated by thresholding techniques. Publicly available databases are used for DR severity testing. The support vector machine classifier (SVM) used to separate fundus images in various levels of DR based on feature set. The proposed system obtained the better results compared to the existing techniques in terms of statistical measures sensitivity, specificity and accuracy.

**A SIMPLIFIED APPROACH FOR ASSESSING THE LEAK-BEFORE-BREAK FOR THE FLAWED  
PRESSURE VESSELS**

**Paper ID-1078**

**A paper presented by:** Kannan P., Amirthagadeswaran K.S., Christopher T., Nageswara Rao B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Surface cracks or embedded cracks in pressure vessels under service may grow and form stable through-thickness cracks causing leak prior to failure. If this leak-before-break phenomenon takes place, then there is a possibility of preventing the vessel failure. This paper presents a simplified approach for assessing the leak-before-break or failure of the flawed pressure vessels. This approach is validated through comparison of existing test data.

**A NOVEL RANK BASED CO-LOCATION PATTERN MINING APPROACH USING MAP-REDUCE**

**Paper ID-1079**

**A paper presented by:** Sheshikala M., Rajeswara Rao D., Vijaya Prakash R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

With the increase in spatial data analysis, the co-location patterns and its dependencies are used to discover the complex patterns on spatial databases. Most of the traditional spatial data mining techniques have been implemented based on the assumption that the data is meaningful and clean. It is essential to study the data integration issues along with spatial co-locating patterns. Generally, spatial co-location mining algorithms are used to discover the spatial objects and its dependencies among them. As the data size increases, the co-location objects and its patterns are difficult to process on complex spatial objects. In this paper, an optimized spatial co-locating pattern mining framework was developed to discover the highly ranked correlated patterns using the hadoop framework. This MapReduce model was used to minimize computational time and space on complex spatial databases. Finally, the experimental results on the complex spatial data are evaluated using the proposed framework and the traditional hadoop based pattern mining models.

**INCREMENTAL EVOLUTIONARY GENETIC ALGORITHM BASED OPTIMAL DOCUMENT  
CLUSTERING (ODC)**

**Paper ID-1080**

**A paper presented by:** Kousar Nikhath A., Subrahmanyam K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Clustering is one of the phenomenal process towards information retrieval and knowledge discovery. Cluster optimality is still a questionable factor for current benchmarking clustering strategies. In particular document clustering is most sensible towards information retrieval and knowledge discovery, which is due to the curse of high volume and high dimensionality observed in recent times. In order to this many of document clustering models have been devised in recent times, but all of these models are questionable either the case of cluster optimality, process time complexity or adoptability. Henceforth, here we devised a deep machine learning approach called incremental evolutionary genetic algorithm based optimal document clustering (ODC) process. The experiments were done on documents dataset with curse of high dimensionality and volume. The results obtained from the experiments observed to be remarkably optimistic towards document clustering and also evincing the linearity in time complexity and memory usage.



**SUBOPTIMAL COMPARISON OF AF AND DF RELAYING FOR FIXED TARGET ERROR  
PROBABILITY**

**Paper ID-1081**

**A paper presented by:** Kumar D.P., Babu M.S., Prasad M.S.G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper, multi-node hybrid Cooperative cellular communication is considered with Amplify and Forward (AF) and Decode and Forward (DF) relaying protocols. Most of researchers have evaluated the performance of cooperative communication either with DF or AF relaying protocols. Considering single DF relay at midway between Source and Destination, for fixed target error probability we have evaluated the performance of multiple AF relays with shortest path relay selection criteria. The analysis is further extended to compare the energy consumption per bit for selected multiple AF and single DF relays..

**GRID VOLTAGE STABILITY ANALYSIS OF WIND ENERGY CONVERSION SYSTEM BASED  
PMSG BY USING MATLAB/SIMULINK**

**Paper ID-1082**

**A paper presented by: Kumar G.A., Jeyanthi P.A., Devaraj D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India**

**Abstract:**

To diminish the environmental pollution and to meet the demand of power generation, the nations are concerned to generate the electrical power through the renewable energy resources. The wind energy is the massive energy resource compared to other mode of renewable energy resources. To integrate the wind energy into the grid often causes stability issues in the grid. The stability issues are normally called as voltage stability. In general the wind is alternatively changes the turbine speed, hence to maintain the voltage stability in the grid the DC link voltage in back to back converter should be same as the grid voltage. In order to achieve this, in this proposed work the gate signals passed to the rectifier side as well as inverter side is controlled through the Maximum Power Point Tracking (MPPT) control strategy and Hysteresis current control strategy. By using these control strategies voltage stability is maintained to the power grid.

**PROFILE BASED PERSONALIZED WEB SEARCH USING GREEDY ALGORITHMS**

**Paper ID-1083**

**A paper presented by:** Lakshmi Prasanna P., Sekhar Babu B., Rajeswara Rao D., Lakshmi Anusha J.,  
Pratyusha A., Ravi Chand A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Internet usage is being increased as it provides information to all the users. The required information is retrieved by the search engines. The currently working search engines using sophisticated algorithms will not always provide relevant information to user's requirements. To resolve the issue, Personalized web search is used that will improve the quality of the search result by reordering the search results. This web search is done to provide relevant results using the user profile. The proposed UPS framework will dynamically generate a user profile for a user's query prioritizing the user's privacy. To acquire this we are implementing Greedy DP and Greedy IL Algorithms that are used for runtime generalization.

**MODIFIED SECURE SPIN USING CLUSTER HEAD SELECTION FOR DATA CENTRIC  
WIRELESS SENSOR NETWORKS**

**Paper ID-1084**

**A paper presented by:** Mohanrao K.R.R., Vineela C.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Routing protocols are proposed for the development of the data transmission in wireless sensor networks. Many protocols were proposed to transmit the data in an efficient manner. This Paper uses clustering algorithms to send the data over different geographic regions. This paper works on the data gathering and data aggregation to base station which is important and critical task in DCWSN. Based on user application for example: Battle field environment, clustering algorithm is used. This paper assumes that sensor nodes were uniformly distributed and coordinates of the base station and nodes are known. This paper uses the cluster head based selection scheme and a proposed protocol known as SSPIN. Proposed scheme having better data gathering, energy efficiency, throughput, etc. compared to the standard LEACH protocol. The proposed scheme is implemented and simulated in NS2.34. Simulation shows proposed protocol performance through put is better than the existing system.

**A NOVEL TRANSMISSION TECHNIQUE FOR INTERFERENCE MANAGEMENT AND  
MITIGATION IN 3GPP LTE-ADVANCED**

**Paper ID-1085**

**A paper presented by:** Rentapalli V.R., Sowjanya B., Madhav B.T.P., Madhavi B., Bhavani K.V.L.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In order to achieve improved cell edge throughput in LTE-Advanced, CoMP technology is introduced to support high data rates over wider bandwidths. Coordination of control of data and channel interference is important to maintain the uplink and downlink coverage to enhance channel performance. CoMP is a new class of transmission scheme for the interference reduction and can have significant effect in terms of improving cell edge user throughput, coverage in the 4G mobile networks. This proposed article presents a coordination technique among multiple cell sites of improving the cell edge user throughput and compares different CoMP joint processing schemes. In this paper author presents a CoMP scheme where Joint Transmission is applied in the downlink of a LTE heterogeneous network structure for the purpose of interference cancellation. The technical challenges for both uplink and downlink are also addressed. Simulation results indicate that the proposed method gives an effective control of ICI and improves cell edge user throughput.

**PNEUMATICALLY DRIVEN VEHICLE WITH RECHARGEABLE BATTERY DURING DRIVE-AN  
EXPLORATORY STEP IN ADDRESSING ENVIRONMENTAL POLLUTION**

**Paper ID-1086**

**A paper presented by:** Gurui Charan U., Phanindra P.D., Murty A.S.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Energy can be stored in compressed air form at very high pressures running to a few dozens of atmospheres. The compressed air properly controlled, timed, released through pressure regulators etc., can be used to run Pistons that in turn can drive an engine. This compressed air can be furnished through already available accumulator as well as through an on board compressor. A battery which gets duly charged as per needs on line in a running vehicle through solar energy depending on availability or offline when the vehicle is stationary can support to run a d.c motor too which in turn can drive the vehicle. This works as a redundant system to attend the drive power needs or in managing to reach destinations. Even existing hybrid vehicles can have this stand-by pneumatic power support. In this work a Pneumatic powered accumulator, solar panels(PVC),battery, d.c motor, compressed air driven engine, air compressors main and auxiliary ( both compressors reciprocating only) combination is considered to drive a specified vehicle for a defined payload peak. One can expect future pneumatic vehicles with back-up battery and with brushless d.c motors (they don't produce carbon dioxide).Battery shall be re-charged through solar cells and pneumatic means also. The failures of previous attempts at a pneumatic vehicle may get benefitted from our work.

**IMPLANTABLE ANTENNAS FOR BIOMEDICAL APPLICATIONS**

**Paper ID-1087**

**A paper presented by:** Manjulatha V., Sri Kavya K.C.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Implantable antenna technology is a current trend in biomedical applications. Implantation is being used in Biotelemetry and Biomedical therapy. The trend of implantation started in 1960's with implantable pace makers and is emerging with improving the size and efficiency of implantable devices. Biomedical applications cover Biotelemetry and Biomedical therapy. Realization of implantable antennas demands for work in various s areas. This work can be categorized as (a) Choosing different antenna configurations suitable for lossy media, (b) minimizing the size of antennas and improving the efficiency, (c) packaging of antennas with proper insulating layers (d) testing the performance to enhance the range of Biomedical applications. This paper gives a review on the work done in all the above mentioned areas.

**TEST CASE PRIORITIZATION ON REAL TIME APPLICATIONS**

**Paper ID-1088**

**A paper presented by:** Pasala S., Prasad M.S.R., Rama Krishna V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Even though test case prioritization is known for its efficiency in detecting faults early by making use of prioritized test suits, it isn't used in real time applications as it needs faults to be known beforehand. "Average Percentage of Faults Detected" determines the effectiveness of test suite orders either it may be prioritized/non-prioritized. It effectively chooses the suite orders such that the faults are detected at an early stage and with less number of test cases. Thus for measuring this certainty, APFD is chosen due to its effective results in our work. By making use of APFD metric, test case suites are prioritized. APFD values for various builds of a HR application are calculated to prove the efficiency of test case prioritization in real-time applications and projects.



**POWERFUL NETWORK MONITORING SYSTEM WITH ADDITIONAL SERVICES INCREASING  
THE NETWORK PERFORMANCE**

**Paper ID-1089**

**A paper presented by:** Rao C.V., Pavan Kumar T., Srikanth V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A powerful and excellent network monitoring system called Nagios helps the various organizations of medium and large scale to detect and solve the IT infrastructure monitoring related problems before they affect crucial and confidential business information. A new feature of services were added to the existing system which has no such type are configuration for Various levels of authentication, Bandwidth usage and alerting services. The Nagios alerts user whenever a defect occurs and alerts when the problem resolved. The alerts were delivered through email, sms, pager. The alert about a particular service can also be delivered through commenting the service from the admin manually. As there were group of admins, any can send alert to the hosts and the chance of conveying wrong alerts by any exist. So making the different login credentials to all the level of authorities helps the user to receive correct alert about the status of the service. The bandwidth usage indication of a client system added to Nagios indicates the Bandwidth usage from a host machine and if the usage limit reached, an alert will be generated and delivered to the admin. Network Development Life Cycle was chosen as a methodology for implementing this system in the network. Nagios is installed in Ubuntu Operating System along with Multi-Router Traffic Grapher (MRTG) and Mail Postfix. MRTG and Mail Postfix were configured to be integrated with the Nagios System. On the client side, NSClient++ has been installed, for monitoring the bandwidth and performance of windows based on operating system.

**JOIN-LESS APPROACH FOR FINDING CO-LOCATION PATTERNS-USING MAP-REDUCE  
FRAMEWORK**

**Paper ID-1090**

**A paper presented by:** Sheshikala M., Rajeswara Rao D., Vijaya Prakash R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Spatial co-location patterns represent a subset of features whose instances are frequently co-located in close proximity; For example Mountain area and new truck purchased are frequently co-located patterns, indicating that a person living close to mountainous areas is likely to buy a truck. Since the instances of spatial features are embedded in a continuous space and share a variety of spatial relationships the implementation of co-location mining can be taken as a challenge. For this, many Algorithms have been proposed, but they are prohibitively expensive with the larger data sets. We propose a parallel join-less approach for co-location pattern mining which materializes spatial neighbour relationships without any loss of the co-location instances. The parallel join-less approach drastically reduces the computation time in finding an instance look-up schema which is used for identifying co-location instances, whereas the previous join-less co-location mining algorithm finds the instances sequentially which increases the computation time. The proposed algorithm is developed on Map-Reduce. The experimental results shows the speed up in computational performance. This algorithm works well for data sets with larger size & having more number of features. As the size of the data set decreases it becomes close to the sequential approach.

**A NOVEL STOCHASTIC ESTIMATOR USING PRE-PROCESSING TECHNIQUE FOR LONG  
RANGE TARGET TRACKING IN HEAVY NOISE ENVIRONMENT**

**Paper ID-1091**

**A paper presented by:** Ravi Kumar D.V.A.N., Koteswara Rao S., Padma Raju K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A novel stochastic algorithm using pre-processing technique is proposed in this paper to deal with the problem of underwater target tracking using passive Sonar. Pre-processing is a concept of reducing the variance of noise present in the measurements given by sensors. This key step is performed ahead of conventional estimation algorithms. Pre-processed measurements are obtained by taking weighted average of present measurements and projected previous measurements. The method is expected to bring down the variance of noise to a great deal based on the fact that the sensor errors are unbiased by nature. The most attractive feature of this algorithm is the capability to track long range targets in heavy noise environments. The algorithm is tested by running Monte Carlo simulations in Matlab R2009a environment. There, it is shown that the estimation error and the time of convergence of the pre-processing technique based algorithms like pre-processed Unscented Kalman Filter (PP-UKF) and Integrated Unscented Kalman filter (PP-IUKF) are much less compared to their non-pre-processing counterparts namely UKF and IUKF, thus indicating the importance of the proposed novel method.

**IMPACT OF BRAND EQUITY ON CUSTOMERS PURCHASE DECISION MAKING WHILE  
CHOOSING BRANDED OVER UNBRANDED APPAREL IN ANDHRA PRADESH**

**Paper ID-1092**

**A paper presented by:** Sandeep Kumar M., Prasanna Kumar D., Srinivasa Narayana M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Apparel shoppers across Indian metros, small towns and cities are increasingly showing their inclination towards western-wear, thereby boosting the sales for branded clothing, making it the fastest growing categories across various apparel segments. Even in the Traditional-wear segment women's western-wear is getting traction. This paper deals with the customers preference for branded apparel and its main focus is to know the customer retention levels towards branded apparel. The main focus is to find out the reasons for the brand awareness and brand retention on various brands, how customers get attracted to apparel brands, how many customers are making a repeat purchases on this brand, not moving to other brand purchases. The study is conducted to know retention, perception and awareness of the customer of apparel with a sample size of 110 and deals with all age groups and occupations of customers in the market. The main objective of this research is to know the customer's lifestyle, income level, perception and behavior about the apparel brands. The major factors identified are quality, price, designs, new arrivals and advertisements. It also focuses on perception, awareness, brand retention of the customers in retail stores and branded shore rooms in Hyderabad, Vijayawada & Guntur.

**CONTRAST ENHANCED LOW-LIGHT VISIBLE AND INFRARED IMAGE FUSION**

**Paper ID-1093**

**A paper presented by:** Teku S.K., Koteswara Rao S., Prabha I.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Multi-modal image fusion objective is to combine complementary information obtained from multiple modalities into a single representation with increased reliability and interpretation. The images obtained from low-light visible cameras containing fine details of the scene and infrared cameras with high contrast details are the two modalities considered for fusion. In this paper, the low-light images with low target contrast are enhanced by using the phenomenon of stochastic resonance prior to fusion. Entropy is used as a measure to tune iteratively the coefficients using bistable system parameters. The combined advantage of multi scale decomposition approach and principal component analysis is utilized for the fusion of enhanced low-light visible and infrared images. Experimental results were carried out on different image datasets and analysis of the proposed methods were discussed.

**REGULAR PATTERN MINING ON DYNAMIC DATABASES USING VERTICAL FORMATE ON  
GIVEN USER REGULARITY THRESHOLD**

**Paper ID-1094**

**A paper presented by:** Gangadhar M.N.S., Sreedevi M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Ascertaining stimulating patterns in effervescent databases is often an exigent task in data mining due to number of transactions arriving dynamically with rapid rates, which is ridiculously expensive in mutually time and space. Mining frequent patterns is a outmoded mining technique in data mining applications, which is based on support count of item set. Support count of item set is not only sufficient, regularity is also considered and required to mine interesting patterns in data mining. As of late, standard itemset mining picked up parcel of consideration in information mining research as a result of its event conduct. In this paper we propose a strategy called MRPDyD (mining standard examples on element information bases) to mine general itemsets in element databases utilizing vertical information position. Our MRPDyD system creates complete arrangement of standard examples in element databases for a client given consistency edge. Our exploratory results demonstrate that this strategy is effective in memory use and execution time.

**MULTIUSER DETECTION USING COMPREHENSIVE LEARNING PSO OVER GK FADING  
CHANNELS IN IMPULSIVE NOISE**

**Paper ID-1095**

**A paper presented by:** Vempati S.R., Khan H., Tipparti A.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The direct sequence-code division multiple accesses (DS-CDMA) signals are transmitted over multipath channels that introduce fading and shadowing. Combined effect of multipath fading and shadowing along with multiple access interference (MAI) and inter-symbol interference (ISI) worsens the system performance. Further, experimental results have confirmed the presence of impulsive noise in wireless mobile communication channels. Hence, this paper presents a comprehensive learning particle swarm optimization (CLPSO) based multiuser detection technique for DS-CDMA systems over generalized-K (GK) fading channels in presence of impulsive noise. Maximal ratio combining (MRC) receive diversity is also incorporated to mitigate the effects of fading and shadowing. Performance of proposed M-decorrelator is studied by evaluating average error rate. Simulation results show that the proposed M-decorrelator performs better in the presence of fading, shadowing and heavy-tailed impulsive noise when compared to least squares, Huber and Hampel M-estimator based detectors.

**REDUCED FILE HASH FOOT PRINTS FOR OPTIMIZED DEDUPLICATION IN CLOUD  
PLATFORMS**

**Paper ID-1096**

**A paper presented by: Jyothirmai M., Thirupathi Rao K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India**

**Abstract:**

Cloud Data Storages decreases colossal burden on clients as for their neighborhood stockpiles yet acquaints new issues with deference with information copies in the cloud. Albeit some prior methodologies managed the issue of actualizing a way to deal with handles cloud security and execution as for de-duplication by appropriately characterizing the concerned gatherings in the cloud and summoning document signature distinguishing proof procedure utilizing customary hash message validation code (HMAC). Because of these hash code calculations like SHA-1 and MD5 the document trustworthiness qualities are colossal prompting idleness variable at the de-duplication estimation. Because of this above issue the capacity exhibit obliges earlier trustworthiness hash codes prompting execution issues. In this paper, we propose a Genetic Programming way to deal with record deduplication that joins a couple of unmistakable bits of affirmation removed from the information substance to discover a deduplication limit that has the limit perceive whether two sections in a store are duplicates or not. As appeared by our trials, our methodology beats a current cutting edge technique found in the writing. Additionally, the proposed capacities are computationally less requesting since they utilize less confirmation. Furthermore, our hereditary programming methodology is prepared to do consequently adjusting these capacities to a given settled copy ID limit, liberating the client from the weight of choosing and tune this parameter.



**OUTAGE PROBABILITY ANALYSIS OF AMPLIFYANDFORWARD AND  
DECODEANDFORWARD DUAL HOP RELAYING WITH HARDWARE DEFECTS**

**Paper ID-1097**

**A paper presented by:** Preetham C.S., Siva Ganga Prasad M., Pratap Reddy N., Sashanka Teja L.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The hardware defects creates distortions in communication systems at both transmission and reception process, which usually reduce the communication System performance. We get misleading results at both transmission and reception ends. The huge number of contributions in the area of relaying neglect hardware defects of both transmitter and reception thus assume ideal hard ware. Such assumptions are used in low rate systems but not applicable to high rate systems. This paper derives the behavior of performance limitations for both amplify-and-forward and decode-and-forward protocols of dual hop relaying system. We also derive the outage probity analysis of the effective end-to-end signal-to-noise-and-distortion ratio (SNGDR). This paper considers the defects at source, relay, and destination and derives the closed-form expressions for the exact and asymptotic Outage probability.

**GOMPERTZ BASED SPRT: MLE**

**Paper ID-1098**

**A paper presented by:** Satya Prasad R., Suryanarayana V., Krishna Mohan G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Sequential Analysis of Statistical science could be adopted in order to decide upon the reliability / unreliability of the developed software very quickly. The procedure adopted for this is, Sequential Probability Ratio Test (SPRT). It is designed for continuous monitoring. The likelihood based SPRT proposed by Wald is very general and it can be used for many different probability distributions. The parameters are estimated using Maximum Likelihood Estimation (MLE). In the present paper, the Gompertz model is used on five sets of existing software reliability data and analyzed the results.

**EDGE AND TEXTURE PRESERVING HYBRID ALGORITHM FOR DENOISING INFIELD  
ULTRASOUND MEDICAL IMAGES**

**Paper ID-1099**

**A paper presented by:** Kishore P.V.V., Kishore Kumar D., Anil Kumar D., Sai Pujitha G., Simarjeeth Singh G., Bala Ananth Sai K., Mohan Kalyan K., Sri Siva Ananta Sai B., Manikanta M., Nanda Kishore M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Medical Ultrasound Imaging is a rapidly growing allied field of Imaging Technology which is widely used around the world for diagnosis by clinicians. Non ionizing radiation is what makes ultrasound imaging safe for non-invasive imaging of human tissues. However, visual quality of ultrasound images poses a challenge for the medical practitioner due to multiple reflections of ultrasound signals. Numerous attempts have been made previously to improve the visual quality of the ultrasound images. The paper presents a novel, structured visual quality improvement mechanism based on daubechies (db) wavelet transform. In the proposed methodology, the segmentation of the ultrasound medical image is carried out with the help of active contour technique. The segmented image and the original image are transformed into wavelet domain. Selected wavelet coefficients are combined to improve the visual quality in terms of contrast and edges enhancements. Visual quality enhancement is emphasized with experimentation on medical ultrasound images obtained from AMMA Hospital radiology scanning center in India. Usefulness of the proposed algorithm is judged against denoising algorithms such as empirical mode decomposition (EMD), linear filtering (LF), median filtering (MF), wiener filtering (WF), wavelet based hard and soft thresholding and wavelet block based soft and hard thresholding. Visual quality metrics computed are peak signal to noise ratio (PSNR), normalized cross correlation (NCC), edge strength (ES), image quality index (IQI) and structured similarity index (SSI). Simulations demonstrate that the proposed enhancement algorithm outperformed the existing de-noising algorithms, instigating for actual medical application.

**SEMG BASED HUMAN COMPUTER INTERFACE FOR PHYSICALLY CHALLENGED PATIENTS**

**Paper ID-1100**

**A paper presented by: Shafivulla M.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper present the use of hand gestures for human-computer interaction, this paper presents an approach to identify hand gestures using muscle activity separated from electromyogram (EMG) using ANN. To retain a constraint-free user's environment, EMG sensing is limited to three arm muscles. EMG signals are processed to attain parameters that are related to the muscles temporal activities. The attainment of these parameters through time constructs a unique signature for each particular gesture. Experimental investigation was carried out to examine the system's reliability in recognizing 6 arm gestures. The results show that the system can recognize the 6 gestures with a success rate of 98%. The advantage of such a system is that it is easy to train by a layer, and can easily be implemented in real time after the initial training.

**A REVIEW ON FABRICATING PROCEDURES IN RAPID PROTOTYPING**

**Paper ID-1101**

**A paper presented by: Suresh G., Narayana K.L.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Rapid prototyping (RP) advancements are in light of the rule of making three-dimensional geometries straightforwardly from computer aided design (CAD) by stacking two-dimensional profiles on top of one another. Rapid manufacturing (RM) is the utilization of rapid prototyping advancements to make end-utilize or completed items. Aside from the ordinary assembling methods which are utilized for quite a while assembling of an item, added substance assembling methodologies have picked up force in the late years. The explanation for this is that these techniques don't oblige extraordinary tooling and don't evacuate material which is exceptionally advantageous really taking shape of a segment. Rapid manufacturing is the developing innovation in assembling commercial ventures with a specific end goal to create the model inside the less time and expense effective. In this paper we talked about a portion of the fast assembling advancements in light of the sort of crude material is utilized for the procedures, applications, preferences and limits.

**DESIGNING AND SIMULATION OF SURROUNDING SUPPORTING MULTICAST ROUTING  
PROTOCOL**

**Paper ID-1102**

**A paper presented by:** Jani S.M., Umar S., Prasada Rao P.V.R.D., Gutta S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In the Wireless sensor networks having of multi-hop transmission in the Adhoc networks. These Adhoc networks having advantages of limited bandwidth and mobility which is more useful for the changing of and usage of various protocols, so that these Adhoc networks having energy conservation, simple to construct, robustness. In this paper we are proposing a new protocol called Surrounding supporting multicast routing protocol [SSMRP]. This protocol uses the mesh networks to enhance the resilience against change of node. This SSMRP utilizes the node locality which reduces the overhead of the route maintenance and it also reduces the route for good data transmissions. In this paper we clearly explains how the data will be delivered efficiently by reducing the overheads.

**SUFFICIENT AUTHENTICATION FOR ENERGY CONSUMPTION IN WIRELESS SENSOR  
NETWORKS**

**Paper ID-1103**

**A paper presented by:** Shaik R., Kanagala L., Sukavasi H.G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Given the understanding of the prospective WSN programs and because of source restrictions, key management emerges as a complicated problem for WSNs. One of the main issues when developing a key management scheme is the system scalability. Indeed, the method should assistance a huge number of nodes to allow a large range implementation of the system. In this paper we implemented a performance trade-off research of power intake vs. Quality of Solutions obtain in stability, suitability, and security for redundancy control of clustered heterogeneous wireless indicator systems using multipath routing to response customer concerns. We urbanized a novel probability style to evaluate the best redundancy stage in terms of direction redundancy (mp) and resource redundancy (ms), as well as the best attack identification configurations with regards to the number of voters (m) and the attack incantation interval under which the life-time of a heterogeneous wireless sensor network is optimized while fulfilling the stability, timeliness and protection specifications of question processing applications in the existence of untrustworthy wireless communication and harmful nodes. Lastly, we used our analysis outcomes to the style of powerful redundancy management criteria to recognize and implement the best design parameter configurations at playback in reaction to environment changes to extend the program life-time.

**COMPACT SERRATED NOTCH BAND MIMO ANTENNA FOR UWB APPLICATIONS**

**Paper ID-1104**

**A paper presented by:** Reddiah Babu M.V., Kotamraju S.K., Madhav B.T.P., Mohan Reddy S.S., Krishna G.V., Giridhar M.V., Sai Krishna V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A compact UWB antenna is been designed to notch Wi-Max (3.3GHz-3.7GHz) and W-LAN (5.15GHz-5.85GHZ) operating bands. The antenna comprises of two square slottedmonopoles with serrated edges on the patch surface and Tshaped stub as defected ground structure. Coplanar waveguide feeding is used in the antenna structure at two ports with the impedance of 50 ohms. Both simulation and measurement are done to study the antenna parameters like return loss, radiation-characteristics, impedance matching and isolation between the two ports. To enhance isolation a slot is cut on the T-shaped ground surface. Two inverted L strips are added on either sides of the groundplane and a slot cut on the ground plane finally form T-shape defected ground structure. The proposed antenna notches two application bands in the UWB range with low mutual coupling which makes the antenna a suitable model for desired applications.



**IMPLEMENTATION OF HIGH SECURITY CRYPTOGRAPHIC SYSTEM WITH IMPROVED  
ERROR CORRECTION AND DETECTION RATE USING FPGA**

**Paper ID-1105**

**A paper presented by:** Narendra Babu T., Noorbasha F., Gunnam L.C.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this article, an encryption algorithm with an error detection technique is presented for highly secured reliable data transmission over unreliable communication channels. In this algorithm, an input data is mapped into orthogonal code first. After that the code is encrypted with the help of Linear Feedback Shift Register (LFSR). The technique has been successfully verified and synthesized using Xilinx by Spartan-3E FPGA. The results show that the error detection rate has been increased to 100% by proposed encryption scheme is effective and improves bandwidth efficiency.

**A COMPARATIVE ANALYSIS OF CHROMIUM DOPED L-ALANINE CADMIUM CHLORIDE  
MONOHYDRATE SINGLE CRYSTAL USING X-RAY DIFFRACTION, THERMAL AND OPTICAL  
TECHNIQUES FOR NONLINEAR OPTICAL APPLICATIONS**

**Paper ID-1106**

**A paper presented by:** Krishna A., Vijayan N., Thukral K., Singh N., Maurya K.K., Bhagavannarayana G.,  
Haldar S.K.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Single crystals of 1 and 3 mol% Cr<sup>3+</sup> doped l-alanine cadmium chloride monohydrate were grown by slow evaporation solution technique using double distilled water as solvent. The amount of chromium incorporated into crystal lattice was found using atomic absorption spectroscopy and was found that actual concentration incorporated into lattice was few ppm only. Lattice dimensions of grown crystals were analysed using powder X-ray diffraction technique and found that the crystals crystallised in monoclinic system with space group C2. Crystalline perfection of grown crystals were assessed using High Resolution X-ray diffraction and X-ray topographic technique and was found that incorporation of chromium has significantly improved the crystalline perfection. Thermal stability of doped crystals were studied using thermogravimetric analysis and found that thermal stability was improved with the incorporation of chromium. Further there optical properties were analysed using UV-vis spectroscopy.

**PATTERN BASED EVALUATION FOR EXTRACTING PERSONALIZED PROFILES**

**Paper ID-1107**

**A paper presented by:** Sathvik Naga Sai P., Siva Kumar P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The customer server model, we display a point by point structural planning and outline execution of PMSE. In this configuration, customer accumulates and stores locally the explore data to secure protection, while substantial undertakings, for instance, thought extraction, get ready, and re situating are performed near PMSE server. PMSE altogether enhances the exactness contrasting with the benchmark. In the event that any system presents for enhancing the productivity of their relative system is being referred to examples also, travel examples getting to. In this paper, we propose CPHC (Classification by Pattern based Hierarchical Clustering), a semi-controlled grouping calculation that uses an example based bunch chain of command as an immediate implies for order. All preparation whatâ€™s more, test occasions are initially bunched together utilizing an occurrence driven example based progressive grouping calculation that permits every case to â€œvoteâ€• for its agent size-2 designs in a way that adjusts neighborhood design centrality and worldwide example interestingness. These examples structure beginning groups and whatever is left of the bunch chain of command is acquired by taking after a remarkable iterative group refinement prepare that endeavors neighborhood data. The subsequent group progressive system is then utilized straightforwardly to characterize test cases, taking out the need to prepare a classifier on an upgraded preparing set. Our exploratory results appear productive preparing of each inquiry improvement in preparing data set.

**AN IMPROVEMENT IN COORDINATION OF DISTANCE AND OVER CURRENT RELAYS FOR  
DERS CONNECTED POWER NETWORKS**

**Paper ID-1108**

**A paper presented by:** Singh M., Sastri M., Vishnuvardhan T.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Distance relays are set in coordination with the over current relays for protection of transmission power lines. Depending upon the location of faults on the transmission lines, faults are cleared by the distance relays from zone-1 or zone-2. If the distance relays fails due to any relay failure reasons. Then over current relays acts at backup relays to clear the same fault with some time delay. These time delays are known as coordination time margins. The coordination time margins with respect to backup over current relays are at minimum at starting of zone-1 and zone-2 of distance relays and increases in forward direction of zones of distance relays. In this research article, the zone -2 of distance relays are optimised in such a manner that desired coordination time margin remains valid for all the fault location in zone-1 and zone-2 of distance relays. Integration of decentralised distributed energy resources may cause the change in the fault levels which may lead to violation of coordination time interval among the relays. In order to handle this problem, the non-standard time inverse over current relays are defined for better zone-2 selection of distance relays. Where the user can select non-standard time inverse over current relay characteristics, which have flexible characteristics to maintain the desired coordination time margin among the over current and distance relays for all possible fault locations on zone-1 and zone-2 of distance relays.

**A DYNAMIC APPROACH TO TASK SCHEDULING IN CLOUD COMPUTING USING GENETIC  
ALGORITHM**

**Paper ID-1109**

**A paper presented by:** Durga Lakshmi R., Srinivasu N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Cloud computing is one of device technology trends in the future since it combines the advantages of both device computing and cloud, Recent years have seen the massive migration of enterprise applications to the cloud. Cloud computing used in business organizations and educational institutions. One of the challenges posed by cloud applications is Quality-of-Service (QoS) management, which is the problem of allocating resources to the application to guarantee a service level along dimensions such as performance, availability and reliability. To improve the QoS in a system one must need to reduce the waiting time of the system. Genetic Algorithm (GA) is a heuristic search technique which produces the optimal solution of the tasks. This work produces one scheduling algorithm based on GA to optimize the waiting time of overall system. The cloud environment is divided into two parts mainly, one is Cloud User (CU) and another is Cloud Service Provider (CSP). CU sends service requests to the CSP and all the requests are stored in a Request Queue (RQ) inside CSP which directly communicates with GA Module Queue Sequencer (GAQS). GAQS perform background operation, like daemon, with extreme dedication and selects the best sequence of jobs to be executed which minimize the Waiting time (WT) of the tasks using Round Robin (RR) scheduling Algorithm and store them into Buffer Queue (BQ). Then the jobs must be scheduled by the Job Scheduler (JS) and select the particular resource from resource pool (RP) which it needs for execution.

**NEW LOW COST PASSIVE FILTER CONFIGURATION FOR MITIGATING BUS VOLTAGE  
DISTORTIONS IN DISTRIBUTION SYSTEMS**

**Paper ID-1110**

**A paper presented by:** Kumar D.R., Anuradha K., Saraswathi P., Gokaraju R., Ramamoorthy M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The harmonic distortion of Bus Voltage in the power system is increasing due to wide use of nonlinear loads. Thus, it is important to analyze and evaluate the various harmonic problems in the power system and introduce the appropriate solution techniques. Use of Voltage source converters as Active Filters or Hybrid Filters are too expensive to be used by low end consumers in the distribution system for elimination of harmonics. Passive filtering has been preferred for harmonic compensation in distribution systems due to low cost, simplicity, reliability and control-less operation. But the conventional use of passive tuned filters suffer from many drawbacks. This paper, firstly analyses the propagation of harmonic current and harmonic voltage in power system networks. A novel configuration of passive filter is designed and developed for mitigating bus voltage distortion. The merits of the introduced techniques were highlighted through a case study with simulation studies using MATLAB/SIMULINK. The feasibility of the proposed configuration of passive filter is verified from the experimental results.

**COMPLEMENTARY PHASE POWER DIVIDER FEED FOR DIPOLE ANTENNA SPECIFIC TO  
GSM 900 BASE STATION APPLICATIONS**

**Paper ID-1111**

**A paper presented by:** Chittela V., Kotapati S., Ratnam D.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Power Divider (PD) design intended for feeding dipole antenna meant for Global System for Mobile Communications (GSM) 900 applications with an antenna height of 22 mm, operating in the frequency range of 880-960 MHz is presented herein. The PD provides 3 dB power division along with complementary phase at its output. The out of phase division of power divider is obtained by utilizing the concept of defected ground structures. A slot line accompanied by T-junction makes up the defected ground region, while coupled microstrip lines form the feed positions. The simulated and the measured results are in good coherence. PD shows good return loss and low insertion loss. It is observed that the dual polarized base station antenna has VSWR below 2 in the required frequency range, 10 dB gain and port to port isolation is less than 22 dB. The antenna is dual polarized and a  $\pm 45$  degrees polarization is maintained.

**UNIQUE CONSTRAINED CLASS LABELED ASSOCIATION RULE MINING**

**Paper ID-1112**

**A paper presented by:** Greeshma L., Pradeepini G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Class labeled Association Rules (CARs) represents the relationship between attribute-valued pairs and frequent item set mining. These rules are mostly used in diabetes healthcare management for reducing the uncertainty factor of co-morbidities. Moreover the user selects mostly subsets of class based association rules. In this paper we proposed an algorithm named as unique constraint class labeled association rule based tree (UCCAR-Tree), which contains three steps. In the first step identifying frequent unique item set constrained. Later, UCCAR tree is constructed. Finally Class labeled Association Rules are obtained from the tree by satisfying minimum confidence user specified threshold value. The experimental results are performed based on German and Chess datasets. The execution time and the scalability of UCCAR for both the datasets are experimented along with describing the characteristics of dataset. Diabetes healthcare management application is demonstrated for the proposed algorithm.



**MORPHOLOGICAL DIFFERENTIAL GRADIENT ACTIVE CONTOURS FOR ROLLING STOCK  
SEGMENTATION IN TRAIN BOGIES**

**Paper ID-1113**

**A paper presented by:** Raghava Prasad C., Kishore P.V.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper focuses on Chan vese active contour (CV) model for segmenting the rolling stock. We present a modified version of Chan vese using morphological differential gradient (CVMDG) to segment rolling stock. The rolling stock videos are captured under four different lighting conditions near Guntur railway station in India. Rolling examination as it is called by railway maintenance staff of Indian railways is visual and auditory examination of moving bogies of a train for defects. The undercarriage moving parts of the train are called rolling stock. This paper makes an attempt to segment the rolling stock from video frames of the rolling stock for further analysis. For better segmentation of rolling stock, video frames are contrast enhanced with virtual exposure wavelet image fusion. The segmented rolling stock is compared with ground truth model to assess the usability of the proposed method for rolling stock segmentation.

**FPGA BASED DESIGN AND IMPLEMENTATION FOR DETECTING CARDIAC ARRHYTHMIAS**

**Paper ID-1114**

**A paper presented by:** Hari Priya D., Sastry A.S.C.S., Rao K.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Detection of arrhythmias by processing ECG has become vital. The QRS complex being a dominant feature of ECG places a key role in identifying Cardiac arrhythmias. The QRS complex being detected by 17 Hz band pass filter and shaped into a square pulse of 200ms width representing R peak by other circuitry is utilized in this work. Various arrhythmias are identified based on abnormalities in the time intervals between consecutive R peaks using Tompkins algorithm is presented. The algorithm is implemented in FPGA Spartan3. The algorithm is written in Verilog HDL and tested on Xilinx 13.1 ISE. The simulated test results have shown the detection accuracy around 99.3% and dynamic power consumed is 22Mw.

**MEDICAL IMAGE WATERMARKING: RUN THROUGH REVIEW**

**Paper ID-1115**

**A paper presented by:** Kishore P.V.V., Srinivasa Rao M., Raghava Prasad C., Anil Kumar D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The objective of this paper is to extract the review work related in the field of watermarking focusing exclusively on medical image watermarking. Medical imaging has impacted positively the health care system around the world by helping doctors perform visual diagnostics of the human body. Sharing this information digitally requires copyright protection which is offered using medical image watermarking researchers around the world. This review has two parts. First part embeds knowledge on medical image watermarking and second part extracts the performance of algorithms from the proposed literature to carry out watermarking of medical images. The performance of these methods is compared using normalized cross correlation coefficient and the algorithms were classified into non intelligence and intelligence based watermarking algorithms. This review concludes that intelligence and heuristic approaches for medical image watermarking give informative extracted cover medical images.

**TERRAIN ANALYSIS OF EXPONENTIALLY SPRAWLING URBAN ENVIRONS OF HYDERABAD,  
TELANGANA, INDIA - AN INTEGRATED GEOSPATIAL AND SEISMO-TECTONIC APPROACH**

**Paper ID-1116**

**A paper presented by: Sunil, Ramesh K., Reddy S.R.K.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

While earthquakes occur on all continents of the planet Earth, the susceptibility to these disasters differs from one area to the other. With unstable landforms, proliferation of unplanned /unscientific growth, poor constructions make the disaster-prone areas more vulnerable. Lack of disaster adaptability, tardy communication/disaster preparedness and poor or no budgetary allocation, developing countries suffer more or less chronically by earthquakes. Asian continent tops the list of causalities due to earthquakes. The destruction and loss caused by earthquakes can be almost beyond comprehension in case of an impact in and around urban/city environment. Though it may not be feasible to control the development of natural phenomena, efforts, however, could be made to minimize the potential risk and alleviate their effects on human lives, infrastructure and property. Therefore, the activities designed to provide permanent protection from seismic hazardous assume utmost sparse. It includes engineering and other physical protective measures and also legislative measures controlling land use and urban planning. The planning in turn is to be based on terrain analysis, soil-structure interaction, seismic hazard mapping and vulnerability assessment. The geospatial technologies coupled with seismic analysis play a crucial role in the evaluation of various terrain characteristics and identifying the seismically sensitive zones. Hence, an attempt has been made in the present study to evaluate various parameters that will have a direct bearing on soil-structure interaction and seismic influence on newly developing high rise complex structures in the western urban environs of Hyderabad, capital of Telangana state.

**INTEGRATED UNSCENTED KALMAN FILTER FOR UNDERWATER PASSIVE TARGET  
TRACKING WITH TOWED ARRAY MEASUREMENTS**

**Paper ID-1117**

**A paper presented by:** Kumar D.V.A.N.R., Rao S.K., Raju K.P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Under water moving target is usually tracked using the Traditional non-linear estimators such as Extended Kalman filter (EKF) and Unscented Kalman filter (UKF) with the help of noisy measurements given by a SONAR operating in passive mode. Here in this paper an Integration Technique based approach which works on the principle "Collective Opinion is better than individual" is proposed to improve the performance of the existing algorithms. In this novel method multiple UKFs accept measurements from towed array and the estimates of these different UKFs are integrated using least squares estimator, and hence the algorithm is named as Integrated Unscented Kalman filter (IUKF). Monte Carlo simulation in MATLAB R2009a is carried out to compare the performance of the proposed IUKF with the existing traditional nonlinear estimators EKF and UKF for two different scenarios to show the superiority of the proposed method.

**GENERALIZED DIFFERENTIABILITY AND INTEGRABILITY FOR FUZZY SET-VALUED  
FUNCTIONS ON TIME SCALES**

**Paper ID-1118**

**A paper presented by:** Vasavi C., Suresh Kumar G., Murty M.S.N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper deals with the fuzzy set-valued functions of real variables on time scale whose values are normal, convex, upper semicontinuous and compactly supported fuzzy sets in (Formula presented.). We introduce and study the fundamental properties of new class of derivative called generalized delta derivative ((Formula presented.)-derivative) and generalized delta integral ((Formula presented.)-integral) for such fuzzy functions.

**SYNTHESIS OF LINEAR CONCENTRIC RING ARRAYS WITH HIGH DIRECTIVITY AND LOW  
SIDELOBE LEVELS**

**Paper ID-1119**

**A paper presented by:** Kumar Naik K., Raju G.S.N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper, intensive investigations are carried out to produce directional patterns from linear concentric ring arrays using isotropic radiators. A ring array which produces about  $8\text{ dB}$  sidelobe level creates a lot of Electromagnetic Interference problems. To overcome this, the concentric ring arrays are used and these produce about  $17.6\text{ dB}$  sidelobe level. However, these sidelobes are still high in some applications such as satellite communications, wireless communications, and broadband applications. Therefore, a linear concentric ring array is a concept introduced for optimization of the radiation patterns are found in. Using the new concept, the directional patterns are numerically evaluated for linear concentric ring arrays for different concentric rings. The data presented here found that the first sidelobe level is reduced by  $36.33\text{ dB}$ , null-to-null beamwidth is decreased to  $6.78\text{ degrees}$ , and directivity is increased to  $90.72\text{ dB}$ .

**MFCC-GMM BASED ACCENT RECOGNITION SYSTEM FOR TELUGU SPEECH SIGNALS**

**Paper ID-1120**

**A paper presented by:** Mannepalli K., Sastry P.N., Suman M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Speech processing is very important research area where speaker recognition, speech synthesis, speech codec, speech noise reduction are some of the research areas. Many of the languages have different speaking styles called accents or dialects. Identification of the accent before the speech recognition can improve performance of the speech recognition systems. If the number of accents is more in a language, the accent recognition becomes crucial. Telugu is an Indian language which is widely spoken in Southern part of India. Telugu language has different accents. The main accents are coastal Andhra, Telangana, and Rayalaseema. In this present work the samples of speeches are collected from the native speakers of different accents of Telugu language for both training and testing. In this work, Mel frequency cepstral coefficients (MFCC) features are extracted for each speech of both training and test samples. In the next step Gaussian mixture model (GMM) is used for classification of the speech based on accent. The overall efficiency of the proposed system to recognize the speaker, about the region he belongs, based on accent is 91%.



**DESIGN AND ANALYSIS OF PRINTED DUAL BAND PLANAR INVERTED FOLDED FLAT  
ANTENNA FOR LAPTOP DEVICES**

**Paper ID-1121**

**A paper presented by:** Seshagirao N.V., Yakalli K., Babu M.A., Madhav B.T.P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Laptop industries need compact and efficient planar antennas which should fit into their cabin comfortably in the allotted limited space. This paper provides the design of such planar inverted folded antenna with dual band operation and analysis based on its performance characteristics. The proposed planar inverted folded antenna model is suitable to operate for Bluetooth and WLAN applications. High bandwidth with good radiation characteristics and compactness with adoptable nature makes this antenna as attracting device in the laptop devices.

**INPUT SPLIT FREQUENT PATTERN TREE USING MAPREDUCE PARADIGM IN HADOOP**

**Paper ID-1122**

**A paper presented by:** Greeshma L., Pradeepini G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Big data has been attracted in information industry and in the society in the recent years, due to the wide availability of huge amount of data in the Internet and the complexity of data is growing every day. Hence distributed data mining algorithms has decided to exploit big data adaptable to current technology. Since there exist some limitations in traditional algorithm for dealing with the massive volume of data set which degrades the performance. So, thereby we require fast and efficient scalable frequent item sets for storing and processing large data sets. Existing algorithm like apriori algorithm performs a multiple scans from external storage, which leads to heavy burden for I/O devices. In this paper, we proposed Association Rule Mining based on Hadoop Distributed File System for storing huge amount of data and implemented using MapReduce object oriented programming paradigm for processing of a data.

**TRAINING AND DEVELOPMENT OF ARTIFICIAL NEURAL NETWORK MODELS: SINGLE  
LAYER FEEDFORWARD AND MULTI LAYER FEEDFORWARD NEURAL NETWORK**

**Paper ID-1123**

**A paper presented by:** Pellakuri V., Rajeswara Rao D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Research in the artificial neural network has been attracting and most successful technology in recent years. Though the first model of artificial neurons was presented by Warren McCulloch and Walter Pitts in 1943, the new models have been raised even in the recent years. Some of the problems are solved by mathematical analysis but it leaves many queries openly for further developments. Anyway, the study of neurons, their interconnected nodes and their actions as the brains primary building blocks is one of the most important research fields in modern biology. The purpose of this research paper is to provide how to learn the logic behind the architectures, methodologies of artificial neural networks. This study consists of two parts: the first part shows the learning of single layer feed forward neural network (SLFFNN) architecture where as in second part the multi layer feed forward (MLFFNN) back-propagation neural network covers the learning and training of optimization techniques.

**COMPUTING ICEBERG QUERIES HAVING NON ANTI MONOTONE CONSTRAINS WITH BIT  
MAP NUMBER**

**Paper ID-1124**

**A paper presented by:** Ravi P., Haritha D., Polala N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Computing aggregation values of user interesting attributes are important in decision and knowledge discovering systems. In real world the users are interested only view to the aggregation values which meet some constrain this type of queries are call iceberg queries. We can optimize memory requirement and CPU time for computing iceberg Queries having anti monotone constrains by eliminating non target set, but for Non anti monotone constrains we cannot eliminate non target sets, so it requires huge memory for answering the query, we propose a algorithm which produce target results using minimum memory and CPU time for computation by bit map numbers, explain with a sample iceberg query.

**AN EFFICIENT MAC PROTOCOL FOR REDUCING CHANNEL INTERFERENCE AND ACCESS  
DELAY IN COGNITIVE RADIO WIRELESS MESH NETWORKS**

**Paper ID-1125**

**A paper presented by:** Anusha M., Vemuru S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

With the increase of wireless mesh networks, channel access, bandwidth usage and channel interferences are the major key issues of multi-channel WMNs and MAC specifications. The multi-radio, multi-channel wireless mesh networks (MR-MC-WMNs) are a kind of networks that provide high reliable communication for a large number of mesh nodes. These networks have mesh routers and channels that are stationary and each router or node has multiple channels. Although IEEE 802.11 versions support up to 3 and 12 multiple non-overlapping channels, it is the major challenge of the multichannel environment which exploits all channels to communicate a large volume of network data in WMNs. Cognitive radio users has the capability to access unused portion of the multichannel spectrum. The major interference can be created by CR as well as licensed user. Traditional MAC based operations are implemented using common-controlchannel to handle cognitive radio end users. We proposed a new Multi-objective based CMR-MCWMMNs framework using TDMA based MAC protocol to optimize the network performance, channel interference and access delay issues in the network. Experimental results prove that, proposed work has less delay and inference rates compared to traditional models.

**CIRCULARLY POLARIZED SLOTTED APERTURE ANTENNA WITH COPLANAR WAVEGUIDE  
FED FOR BROADBAND APPLICATIONS**

**Paper ID-1126**

**A paper presented by:** Madhav B.T.P., Khan H., Kotamraju S.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Coplanar waveguide fed circularly polarized microstrip patch antenna performance evaluation is presented in this paper. The broadband characteristics are attained by placing open end slot at the lower side of the antenna. The proposed design has the return loss of less than -10dB and VSWR<2 in the desired band of operation. A gain of 3dB to 4dB is attained in the desired band with good radiation characteristics and a suitable axial ratio of less than 3 dB is attained in the prescribed band of operation. Proposed antenna is fabricated on the FR4 substrate with dielectric constant of 4.4. Parametric analysis with change in substrate permittivity also performed and the optimized dimensions are presented in this work.

**DATA FUSION IN UNDERWATER ENVIRONMENT**

**Paper ID-1127**

**A paper presented by:** Lakshmi Prasanna K., Koteswara Rao S., Omkar Lakshmi Jagan B., Jawahar A.,  
Karishma S.B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Submarines and Ships of this time are furnished with multi sensors (structure mounted array, towed array and so forth,) making them contemporary in following multi focuses in submerged environment. This paper elucidates Data Fusion calculations, taking into account multi-sensor target information of stages in the arrangement adrift. Two-dimensional following is grasped utilizing Modified Gain Bearings just Extended Kalman Filter in each accessible channel. In this methodology, every sensor utilizes one estimator to remove a state vector and its related covariance grid from its separate sensor estimations. Every channel yield is transmitted over an information connection to combination focus, where track-to-track relationship and state vector combination are performed following composite target state vector. Sonar information Pre-handling diminishes the clamor adequacy, gets difference of the uproarious information, embeds missed heading with evaluated direction and gives assessed orientation if there should arise an occurrence of missed or erroneous bearing estimations.

**DATA ENCRYPTION AND DECRYPTION USING REED-MULLER TECHNIQUES**

**Paper ID-1128**

**A paper presented by:** Neelima U., Noorbasha F.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Reed-Muller codes play an important role in communication. In communication, security and error free data transmission are two major problems. In this paper, we propose a eight bit original data is encoded using distinct Reed-Muller techniques such as positive polarity Reed-Muller(PPRM), negative polarity Reed-Muller(NPRM), fixed polarity Reed-Muller(FPRM) for secure data communication and also we can compare these techniques in terms of cost. The eight bit encoded data which is obtains from these Reed-Muller techniques are encoded again using hamming code for error free communication. It is found that among all these techniques fixed polarity Reed-Muller is the best technique which gives less cost .We can also observes that secure and error free communication is possible between transmitter and receiver. The data encryption and decryption process has been simulated using Isim simulator and the code is written in Verilog HDL.



**SENSITIVITY ANALYSIS OF MEMS FLEXURE FET WITH MULTIPLE GATES**

**Paper ID-1129**

**A paper presented by:** Spandana K., Nagendra Reddy N., Siddaiah N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper deals with the design and modelling of Flexure FET and the FETs are the one of the important fundamental devices in electronic devices.. In this paper we are going analyse one of the MEMS Flexure Gate Field Effect Transistors. Here we will design gate of the FLEXURE FET with different type of materials and with different structure and we made the comparison between all the structures. We apply pull-in voltage to the Gate with respect to the change in the gate voltage the respective displacement of the gate changes which reflect the change in the drain current and sensitivity.

**IMPLEMENTATION OF VIDEO-PROCESSING AND CONTROL ON A ZYNQ SOC PLATFORM**

**Paper ID-1130**

**A paper presented by:** SriVarshini J., NarasimhaNayak V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper represents a hardware and software co-design for real-time video processing module which is a vital part of a smart camera system [1-3]. Video surveillance is the main application of this work. As part of implementation required peripherals, the platform contains a Zynq board device and the OV7670 camera module. In order to develop the required hardware and software co-design in an integrated fashion, Xilinx VIVADO 15.2 and SDK 15.2 is used. To implement the real-time motion picture capture and display functionality of the camera module, OV7670 camera and a VGA monitor have been interfaced with the Zynq platform. This interfacing uses p mod connectors and VGA connector on the Zynq board. The programmable logic is done using the VHDL coding. The application software, written in C language, runs on top of a hardware platform which is opted as standalone in the SDK and uses the provided application programmer interface (API) by the hardware platform. From the device utilization summary, we can observe that, with the proposed hardware and software co-design based video acquisition module, are sufficient for implementing any reasonably complex video processing application in real-time.

**NOVEL ESTIMATION ALGORITHM FOR BEARINGS-ONLY TARGET TRACKING**

**Paper ID-1131**

**A paper presented by:** Omkar Lakshmi Jagan B., Koteswara Rao S., Lakshmi Prasanna K., Jawahar A.,  
Karishma S.B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The work focuses on deployment of novel underwater target estimation algorithm to determine the kinematic state of the target. The Target Motion Parameters (TMP) are found out using bearings-only measurements. If one of the target motion parameters is known, then the rest of them can be found out using the known parameter. The Pseudo Linear Estimator (PLE) algorithm is considered in this paper which is one of the simplest estimation algorithms is presented in this paper to estimate TMP. It is assumed that target speed is known by some means, then the target course and range is obtained using PLE. PLE incorporates the basic features of Kalman filter like sequentially processing, variance included in measurement. The Monte-Carlo simulation is carried out for the tactical geometries and various results demonstrate the superiority of PLE over it's peers for underwater target tracking applications.

**A PROPOSAL FOR MITIGATION OF GRAY HOLE ATTACK IN WIRELESS MESH AD-HOC  
NETWORKS USING S-DSDV**

**Paper ID-1132**

**A paper presented by:** Sumanth K., Gutta S., Umar S., Kiran Kumar K., Hussain A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Wireless Mesh Networks have its desired features like Self-organization and self-configuration it provides advantages for Wireless Mesh Networks like market coverage, scalability, good reliability and low upfront cost. These networks have an effective quality that they are ease of scalability with heterogeneous multihop with very low cost. It is a mobile which is of connectionless-oriented and vigorous traffic of the routed packets. These infrastructure network forms the multi-hop transmission of data packets from peripherals and forms the multiple chains of WLANS. In Wireless Mesh Networks, security is a limitation and which can be overhead easily. Small analysis of this had explained in this paper like security threats such as GRAY HOLE ATTACK [GHA] in DSDV routing protocol. GHA is a special type of DOS attack which is similar to black hole attack which will change the state to various states like selective packet dropping is challenging one. With the effect of this GHA there will be impact on various parameters like E2E delay, throughput etc., A variety of Gray Hole attack solutions have been proposed in the literature. We surveyed and identified different detection and mitigation techniques of Gray Hole attack and explored a new concept that supports the network in various ways with detecting malicious activities of any node in the network and which will increases the network performance in parameters such as packet drop rate, throughput, normalized routing overhead and PDR.

**WIRELESS SECURED DATA TRANSMISSION USING CRYPTOGRAPHIC TECHNIQUES  
THROUGH FPGA**

**Paper ID-1133**

**A paper presented by:** Rama Satya Nageswara Rao I., Murali Krishna B., Shameem S., Khan H., Madhumati G.L.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The need to protect the data disturbances and unauthorized access in communication has led to development of several cryptographic algorithms. Current issue in modern world as popularity of internet, e-commerce and communication technologies has emerging and they became the medium to security threats. Due to advancement in cryptographic techniques the DNA technique is a new crypto algorithm to encrypt and decrypt data. It consists of two stage encryption based on DNA sequence enhances the data security compared to conventional methods. In encryption process the former stage will encrypt the data (plain text) with a random key generated by random DNA sequence generator. Latter and final stage the encrypted data is re-encrypted with DNA translation to generate cipher. The cryptographic techniques (symmetric algorithm) is designed and simulated using Xilinx ISE and targeted on Spartan-3E FPGA interfaced with ZigBee for wireless communication.

**ISSUES IN ROUTING MECHANISM FOR PACKET FORWARDING : A SURVEY**

**Paper ID-1134**

**A paper presented by:** Devikar R.N., Patil D.V., Chandraprakash V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Nowadays internet has become more popular to each and every one. It is very sensitive to nodes or links failure due to many known or unknown issues in the network connectivity. Routing is the important concept in wired and wireless network for packet transmission. During the packet transmission many times some of the problems occur, due to this packets are being lost or nodes not able to transmit the packets to the specific destination. This paper discusses various issues and approaches related to the routing mechanism. In this paper, we present a review and comparison of different routing algorithms and protocols proposed recently in order to address various issues. The main purpose of this study is to address issues for packet forwarding like network control management, load balancing, congestion control, convergence time and instability. We also focus on the impact of these issues on packet forwarding.

**NUMERICAL AND EXPERIMENTAL COMPARISON OF HEAT TRANSFER ENHANCEMENT IN  
A 2-PASS DOUBLE PIPE HEAT EXCHANGER WITH AND WITHOUT INSERTED TWISTED  
TAPES**

**Paper ID-1135**

**A paper presented by:** Panitapu B., Kanthimathi T., Chaitanya K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Enhancement of heat transfer using twisted tapes inserted in a 2-pass double pipe heat exchanger is studied experimentally and numerically using Ansys Fluent. A numerical model is developed to investigate the effects of cold water flow rates on the Nusselt number, overall heat transfer coefficient in both inner pipe and annulus. Results show that the numerical and experimental results are in good agreement with each other. The twist ratio for numerical heat transfer enhancement is taken as  $y=10$ .

**SYNTHESIS, CHARACTERIZATION AND TEXTURAL ANALYSIS TO REDUCE THE  
MULTIPLICATIVE NOISE IN NANO DISPERESED LIQUID CRYSTALLINE COMPOUNDS USING  
HF TECHNIQUE**

**Paper ID-1136**

**A paper presented by:** Manepalli R.K.N.R., Pardhasaradhi P., Madhav B.T.P., Jayaprada P., Pisipati V.G.K.M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Synthesis and characterisation are carried out on four N-(p-n-decyloxy benzylidene-)p-n-alkoxy anilines 100.0m Liquid Crystalline compounds(LC) with n=10 and m=3, 5 and with 1% ZnO nano particle dispersion. Further to reduce the multiplicative noise a component of the image is separated linearly in the frequency domain, Homomorphic Filtering technique is used. This technique provides frequency domain procedure to improve the appearance of an image by gray level range compression and contrast enhancement. Textures of the compounds are recorded with polarising microscope connected with hot stage and camera, the illumination and reflectance combined multiplicatively and the image quality is reduced to identify the exact phase in the compound. The compounds with m=3 exhibits NACB phases and m=5 exhibits NACIG, while with a nano dispersion of ZnO exhibits the same phases with reduced clearing temperature as expected when the doping is done with 1%.



**CLASSIFICATION OF PENAEID PRAWN SPECIES USING RADIAL BASIS PROBABILISTIC  
NEURAL NETWORKS AND SUPPORT VECTOR MACHINES**

**Paper ID-1137**

**A paper presented by:** Sucharita V., Venkateswara Rao P., Bhattacharyya D., Kim T.-H.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This research is to present a new approach for the classification of the Penaeid Prawn Species. The extraction of Texture features based on the Gabor filter is proposed in this method. These extracted features are used for the classification of Penaeid Prawn Species based on Radial Basis Probabilistic Neural Networks and Support Vector Machines. The texture of the prawn image are extracted based on different scales and orientations by which mean and standard deviation are calculated. The resultant Gabor feature values are fed as input to Radial basis Probabilistic Neural Network Classifier for the classification of the species. The experimental results show the performance of the extracted feature vectors for Penaeid Prawn species recognition. The RBPNN gives better recognition when compared with Support vector machine.

**AN EFFICIENT CLOUD BASED KEY AGGREGATE DATA SHARING**

**Paper ID-1138**

**A paper presented by: Srinivas Kumar P., Thirumala Rao B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India**

**Abstract:**

Cloud Infra contains a gathering of capacity servers, giving a fantasy of boundless stockpiling what's more, getting to. Security is one of the basic segments of such a framework. Putting away information at a remote outsider's cloud framework is continually bringing on genuine worry over information classification and survivability. Numerous encryption plans secure information trustworthiness, however they constrain the usefulness of the information proprietor particularly concerning disavowal on the grounds that a solitary key based assurance plans are utilized for encoded information. So we propose another cryptosystems that can create a settled estimated information securing keys such that an information appointment occasion requires allocating an arrangement of irregular keys to arbitrary customers as decoding rights for particular arrangement of figured substance. An fascinating element is that one can total numerous arrangement of mystery keys from single mystery solidarity and at the same time making them as reduced as could be allowed simply like their guardian single solidarity, yet at same time pressing the force of the considerable number of keys being collected that can interestingly allocated to a client. The JSON Web Algorithms (JWA) detail registers cryptographic calculations and identifiers to be utilized with the JSON Web Signature (JWS) [JWS], JSON Web Encryption (JWE) [JWE], and JSON Web Key (JWK)[JWK] particulars. It characterizes a few IANA registries for these identifiers. Every one of these details use Java Script Object Notation (JSON) based information structures. This is utilized to produce comparable script picture era for handling effective capacity in distributed computing. Our trial results show proficient execution environment on assessing script picture partaking in cloud.

**HOW THE SMRTCARD MAKES THE CERTIFICATION VERIFICATION EASY**

**Paper ID-1139**

**A paper presented by: Rao L.J., Rao M.V., Saradhi T.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India**

**Abstract:**

The main idea of this paper is to create a paperless atmosphere without fraud using the well-used Smart card technology which can not only reduce the effort of maintaining the certificates but also used to create the technological innovation in the Educational field with the help of ongoing trend. In this paper, we first know about the basics of the Smart card and then we deploy those basics to implement our proposed system. To incorporate the existing system in to the proposed system we must follow some phases like Knowing requirements, design, analysis, and implementation. Introducing these Smart cards in to the Educational Field may avoid fraud and miscellaneous certificates. These pocket sized cards will be unique and authenticated for each individual, easy to carry and maintenance free.

**OPTICAL CHARACTER RECOGNITION TECHNIQUE ALGORITHMS**

**Paper ID-1140**

**A paper presented by:** Venkata Rao N., Sastry A.S.C.S., Chakravarthy A.S.N., Kalyanchakravarthi P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper, we present a new neural network (NN) based method for optical character recognition (OCR) as well as handwritten character recognition (HCR). Experimental results show that our proposed method achieves increased accuracy in optical character recognition as well as handwritten character recognition. We present through an overview of existing handwritten character recognition techniques. All the algorithms describes more or less on their own. Handwritten character recognition is a very popular and computationally expensive task; we describe advanced approaches for handwritten character recognition. In the present work, we would like to compare the most important once out of the variety of advanced existing techniques, and we will systematize the techniques by their characteristic considerations. It leads to the behaviour of the algorithms reaches to the expected similarities.

**MEDICAL IMAGE WATERMARKING WITH ANN IN WAVELET DOMAIN**

**Paper ID-1141**

**A paper presented by:** Kishore P.V.V., Prajwal K.S., Mohan M.K., Koteswarao S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Medical images hold health information about a patient. Due to their inability to show information clearly and lack of expert doctors, motivate patients to send their imaging reports using unsecured Internet. The objective is to provide security to medical images of patients passing through unsecured networks through watermarking methods. The watermarking will most likely will alter pixels in the medical image reducing object composition of the medical image. Medical image quality affects the health of a patient. To avoid such quality issues during watermarking, the algorithm uses artificial neural network (ANN). ANN remembers and rebuilds the degraded pixel information by its location during watermarking and transmission. Embedding and extraction of watermark uses wavelet domain. Experimentation performed on three types of medical images Ultrasound imagery (US), Magnetic Resonance Imaging (MRI) and Computer Tomography (CT) of test subjects brought from hospitals in Vijayawada in India. The psnr and normalized cross correlation coefficient (ncc) measures the visual quality and quantity of the watermarking procedure with ANN. The DWT-ANN based method preserves the quality of the medical images.

**HYBRID MODULATION TECHNIQUE FOR NEUTRAL POINT CLAMPED INVERTER TO  
ELIMINATE NEUTRAL POINT SHIFT WITH MINIMUM SWITCHING LOSS**

**Paper ID-1142**

**A paper presented by:** Raju K.N., Rao M.V.G., Ramamoorthy M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In neutral-point-clamped (NPC) multilevel inverter eliminating neutral point shift is a challenging task. The carrier based pulse width modulation (CBPWM) techniques proposed in literature for this works well for certain range of load power factor and modulation index. Though non-nearest vector (NNV) Space vector PWM (SVPWM) technique would solve this problem, it does it at the cost of increased switching loss. This paper proposes a hybrid technique by combining both CBPWM and SVPWM. In this technique CBPWM is used for modulating the output voltage and SVPWM is used to eliminate neutral point shift. SVPWM technique is activated for a small duration of one carrier cycle at every zero crossing of reference. This minimizes the switching transitions and thereby switching loss. The proposed technique is tested in MATLAB-Simulink under varying load power factor(pf), different initial capacitor voltages and for unbalanced loads. Simulation results yield better performance.

**IMPLEMENTATION AND RECONFIGURATION OF BASIC DIGITAL MODULATION AND  
DEMODULATION TECHNIQUES ON FPGA**

**Paper ID-1143**

**A paper presented by:** Prasad B.K.V., Kumar P.S., Charles B.S., Priya R.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In modern communication systems the Autonomous modulation and demodulation technique is done using proper signal detection schemes and prominent receiver structure. The implementation of BPSK, FSK, ASK modulation and demodulation techniques are created in Simulink which is converted into Xilinx core and this further undergoes changes using system generator module. The modulated signals obtained from these simulations are compared with the obtained signals after implementation. The FPGA was programmed with the help of ARM processor to compile the bit files to select the best modulation that has best channel support. The interface is done between the controller (STM32) and FPGA (xc3s500e-256) using JTAG. The XSVF format and synopsis programmed files are stored in the SD-card of the microcontroller. The HyperTerminal displays the output corresponding to the selected modulation. The optimum modulation is selected based on available bandwidth, bit-error-rate and signal to noise ratio. Hence, Among available tools for FPGA design, System Generator is a system-level modeling tool that provides better quality of service, system complexity, power efficiency, bandwidth efficiency and cost effectiveness, more secure, reliable and efficient compared to the analog communication.

**THE CRITICAL SUCCESS FACTORS AFFECTING THE PERFORMANCE OF CONSTRUCTION  
INDUSTRY**

**Paper ID-1144**

**A paper presented by:** Anoop T., Asadi S.S., Prasad A.V.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The project managers should have a clear idea in which aspects of project might be critical to complete the project successfully. For a project to be successful, it is necessary to understand the project requirements right from the start and go for project planning, which provides the right direction to the project managers and their teams to execute the project perfectly. A successful project is one that is delivered on time and managed within the budget, quality, cost and time have been recognized as "triple constraint" or important factors of a successful project. The work of project success and critical success factors is often considered as one of the vital ways to improve the effectiveness of project delivery. Successful construction projects greatly depend on how the project has been managed and controlled. The critical success factors are more useful in decisionmaking support. The major objective of this study was to identify, categorize, and prioritize a general set of critical success factors for construction sectors of various backgrounds. The paper relied mainly on analytical and descriptive methodologies. A questionnaire was designed in the light of the literature review. The collected data is analyzed by SPSS (Statistical Package for the Social Sciences) software using statistical tools such as, Pearson co-relation coefficient and regression analysis.



**THE EFFECT OF EARNED VALUE MANAGEMENT ON RISK ASSESSMENT USING  
ANALYTICAL NETWORK PROCESS: A CASE STUDY**

**Paper ID-1145**

**A paper presented by:** Kumar G.P., Asadi S.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This study facilitates the project manager to compute and reduce the project risk value consuming the results of Earned Value Management (EVM) Indices viz., Cost Variance (CV), Schedule Variance (SV), Cost Performance Index (CPI), Schedule Performance Index (SPI), Cost and Time Estimate To Complete (ETC), Cost and Time Variance at Completion (VAC), Cost and Time Estimate At Completion (EAC), To Schedule Performance Index (TSPI), To Complete Performance Index (TCPI) and Critical/consistency Ratio (CR); and gauging the effect of computed risk factors over the successful Project Characteristics, specifically Quality, Productivity, Client satisfaction and Organizational stature by adopting the Analytical Network Process (ANP) structure model in Super Decision software, that stands to be a reputable decisionmaking tool. This paper focuses on the estimation of project forecast and risk value prior and later to the implementation of required control measures. For convenience, this methodology includes the partition of the project into three phases. The first is the computation of project forecast values and risk value without the implementation of control measures, second is the identification of risks factors and ranking of the same that exists as the cause of higher risk value and final is the estimation of new project forecast value and risk value with the implementation of control measures in the form of percentage control. It also considers the center relationship of EVM indices for risk assessment for improved conditions with the implementation of control measures. It procures an objective reference for engineering project risk control.

**SIMULATION OF A CASCADED MULTILEVEL INVERTER TOPOLOGY WITH REDUCED  
NUMBER OF SWITCHES AND SOURCES ARRANGED IN MATRIX STRUCTURE**

**Paper ID-1146**

**A paper presented by:** Potharlanka S.S.K., Obbu C.S., Bandi N.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper analysis an improved topology of a cascaded multilevel inverter (CMLI) that utilizes less switch count topological structure than that of conventional topology. So with the reduced number of switches, the topological structures is designed by the mould of a matrix for a CMLI. As the numbers of switches are depleted in the conduction path, so both the switching as well as conduction losses are reduced, lower input current distortion and electromagnetic interference are also reduced. Therefore it assists for the higher efficiency of the converter. The propound inverter focus extends the outstretch to produces different number of output voltage levels from the congruent topology, there where it uses the same number of the voltage source and very less number of switches when compared to the conventional inverters. Thus the desired operation of the power modules and firing pulses are generated by the annex pulse width modulation (PWM) techniques strategy. And its changes in the harmonic spectrum will be analyzed. The converter will be modeled with the assist of MATLAB/SIMULINK.

**OPTIMAL SITING AND SIZING OF SOLAR POWER SOURCES IN INTERCONNECTION GRID  
SYSTEM**

**Paper ID-1147**

**A paper presented by:** Reddy S.Y., Reddy D.S., Rao G.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Growing concerns electrical power demand in need and necessity of daily livelihood of life. Impacted over addition power demanded there is climate impacts, environmental conditions due to conventional power generation resulted in improvement of cheaper solar power generation in the whole distribution system network, and programs offered by governments have contributed to an increment in the number of distributed energy resources (DERs) system in commercial and domestic electrical power output. It is well known that fact the non-optimal size and non-optimal siting system may lead to high power losses, bad voltage profiles and high losses of profit margins of DISCOM's end. Therefore, this paper to determine the location best siting and filler of multiple DERs generators supported power loss, generation units, and cheaper power transfer demonstrated through IEEE 30 bus standard test system with help of Power World Simulator Package and single line drawing of 2MW solar PV power plant added to APDISCOM .

**EVALUATION OF LOSS OF LOAD EXPECTED IN AN INTEGRATED ENERGY SYSTEM**

**Paper ID-1148**

**A paper presented by:** Bharath Kumar T., Chandra Sekhar O., Ramamoorthy M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The main objective of work presented in this paper is about the prediction of power availability in advance from Energy Sources. The wind is a highly variable energy source and behaves quite different than conventional energy sources. The participation of wind energy with conventional sources of generation is increasing rapidly and it is treated as integrated energy system. In the case of wind energy, velocity predictions are important to assess the power generation in future. The prediction of wind velocity in this paper is further helpful to estimate the reliability analysis of the system. The reliability analysis is done by evaluating the Loss of Load Expected (LOLE). The reliability analysis of complete system with incorporation of wind power along with conventional plants is achieved through prediction of wind power. Hence the loss of load expected to happen in future is helpful to take decisions. The wind velocity predictions are validated with the actual data collected from MOSDAC (Metrological and Oceanographic Satellite Data Archival Centre).

**FLEXURAL BEHAVIOUR OF REINFORCED GEOPOLYMER CONCRETE BEAMS WITH GGBS  
AND METAKAOLINE**

**Paper ID-1149**

**A paper presented by:** Kumar P.U., Sarath Chandra Kumar B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In the present study metakaoline and ground Granulated Blast Furnace slag (GGBS) is used to convey Geopolymer concrete. Geopolymer bond is set up by using dissolvable course of action of sodium silicate and sodium hydroxide. This settled extent is 2.5 and the convergence of sodium hydroxide is 10M. This study helps in picking up learning about the morphological arrangement of solid which may bring about way softening patterns up development industry. The paper focuses on investigating characteristics of Ground Granulated Blast furnace Slag (GGBS) and adding metakaoline based Geopolymer Concrete with M40 Grade Concrete. This leads to examine the admixtures to improve the performance of the concrete. The paper focuses on investigating characteristics of Geopolymer concrete with various proportional of replacement of cement with Ground Granulated Blast furnace Slag (GGBS) and adding metakaoline. Efforts are being carried out to conserve energy by means of promoting the use of industrial wastes like Ground Granulated Blast furnace Slag (GGBS), and metakaoline. The reinforcement was designed considering a balance section for the expected characteristic strength. All the specimens are tested by using twopoint loading.

**CREATION OF WEB BASED DECISION SUPPORT INFORMATION SYSTEM FOR EVALUATION  
OF TOPOGRAPHIC CHARACTERISTICS USING REMOTE SENSING & GIS AND VISUAL BASIC  
PROGRAMME**

**Paper ID-1150**

**A paper presented by:** Sarma G.S., Asadi S.S., Narayana S.L.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The present study is aimed to prepare the Topographical characteristics micro level planning for sustainable development of study area in this digital thematic maps has prepared namely, Land use/Land cover, Geomorphology, drainage network, Transport network, etc. using satellite imageries on ARC/INFO GIS platform. This constitutes the spatial database and to create information system for micro level development. The study is part of Nellore district. The present study resulted in information system for micro level planning of natural resources with a scope to develop the further by providing the information necessary about the resources. This system is user friendly and many decisions can be made by the user according to his choice. The Decision Support System developed here can further serve as a replica to other study areas.

**AN INTEGRATED APPROACH FOR EVALUATION OF ENVIRONMENTAL IMPACT  
ASSESSMENT - A MODEL STUDY**

**Paper ID-1151**

**A paper presented by:** Varun Teja T., Asadi S.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Environmental Impact Assessment study is key for any project, without which it is unlikely to get the authorization for the commencement of a project. Keeping this in view, this review has been taken. The principle objective of this is to concentrate the benchmark status of air, noise, water, organic and socio-economic conditions. System for Impact Assessment has been coordinated inside a zone of 7 km go around the project for an Automobile Industry site as per ISO Standards of Air Quality, Noise Quality Water Quality, Soil Quality. Socio-economic conditions, Biological conditions under this accessibility of review zone have been considered and Solid Waste Management, Occupational Safety and Health Safety procedures have been suggested. This kind of studies particularly helpful for keenness in EIA Reports.

**IMPLEMENTATION OF LEAN METHODOLOGY IN INDIAN CONSTRUCTION  
Paper ID-1152**

**A paper presented by:** Abhiram P., Asadi S.S., Prasad A.V.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Background: Indian construction industries play a vital role in economic growth of the country. But the construction industry is very much challenging because of 3D's in industry difficult, dangerous and demanding so it lag far more years from manufacturing industries. To overcome this, Lean technique of manufacturing industry were applied to construction industry to minimize waste, inefficiency. Objective: To identify major possible waste factors in construction industry and suggesting suitable mitigation measures. Analysis: Questionnaire survey is prepared on different wastes and analysing them using Statistical Package of Social Sciences (SPSS) software and comparing the result with manual methods. Expected Findings: Manual ranking is given to highest waste producing factor of FRIEDMAN MEAN RANK Technique which is an outcome of SPSS. Improvements: With conclusions drawn we can minimize waste, cost, time and to maximize performance of construction projects.



**COMPOSITE MESSAGING SYSTEM FOR TRAFFIC MANAGEMENT IN SMART CITIES**

**Paper ID-1153**

**A paper presented by:** Sasi Bhanu J., Sreeharsha K.V.S., Vyshnavi K., Sastry J.K.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

An intelligent traffic management system can be conceived through many of individual sub systems which include bio sensing, remote sensing, imaging, cognitive expert systems, messaging, visualization, integrated hybrid communication system. Each of the sub systems while is expected to work independently, should also be in existence in unison along with other sub systems. Messaging systems helps in showing traffic routes by using electronic signs to send real time information to travelers about events and traffic conditions so that motorist can take instantaneous decisions to travel in the right directions. Information that should be displayed on the message sign include speed limit, traffic flow, congestions, diversions, road closures, alternative routes, hazardous situations, work ahead, in-coming traffic situation, weather condition, the date, time, temperature, availability of public transport etc. The efficiency of the message display is dependent on many factors that are supported by different technologies in use. There has not been a single technology that is capable of all message display requirements. For efficient messaging a composite system that considers all the messaging requirements has to be supported. In this study, a survey on technologies that can be used for displaying sign related messages on the sign boards across the traffic route for giving guidance to the drivers for moving their vehicles in the sign directions have been presented and an extent to these technologies could meet the Traffic monitoring and controlling requirements has been presented. A composite messaging system that is amenable for traffic management within smart cities has been presented.

**ENSEMBLED RULE BASED CLASSIFICATION ALGORITHMS FOR PREDICTING  
IMBALANCED KIDNEY DISEASE DATA**

**Paper ID-1154**

**A paper presented by: Potharaju S.P., Sreedevi M.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Imbalanced data is a type of data where there exists a difference in the ratio of classes. It occurs easily in real life of data analysis. In Data mining the functioning of learning algorithms caused by the imbalanced data. Most of the machine learning algorithms has a tendency to prejudice towards the class of majority in case of imbalanced data and hence those algorithms misjudge the minority class. Therefore, In this article we discuss a systematic way to address the imbalanced data classification problem by applying the rule based ensemble learning techniques like bagging, boosting, voting and stacking to build models, and then accelerates the performance of learning algorithms. In this research, we have preferred real data of chronic kidney disease which is collected from Appolo Hospitals, Tamil Nadu, India, to predict kidney disease of patients. The collected data is initially imbalanced. Firstly, the imbalanced data is balanced by applying SMOTE algorithm, which is an over sampling technique. Then applied various ensemble learning techniques to make better prediction. The incurred results showed that the model template chosen can minimize the problem of misclassification of imbalanced data efficaciously. But this model template cannot classify correctly when imbalanced rate of class increases i.e. in case of Big Data. For better result of imbalanced Big Data, new algorithmic plan of action has to be exploited which can be measured by using Hadoop framework and mapreduce programming model.

**INSPRINT AUTOMATION IN AGILE SCRUM-A CASE STUDY**

**Paper ID-1155**

**A paper presented by:** Jammalamadaka K., Ramakrishna V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Test automation is pivotal with focus on reducing test execution time and also acts as a safety net to catch regression defects in house. In agile environment with shorter delivery cycles, emphasis for test automation extends beyond regression testing to new features. Ability to develop sustainable, faster and reliable automation is important in developing automation in parallel to development and late integration of scripts to create the end to end workflow. This requires a new mind set and practices which brings new challenges with maintainability and reliability of test automation. In this paper we discussed a spiral strategy blended with critical review of automation pyramid and came up with right automation at right level concept, and also discussed a few challenges we faced and how we overcame to sustain the speed in the whole development process. And also presented a perspective of actual and projected savings with 'in sprint' automation.

**ISLGAS: IMPROVED SUPERVISED LEARNING IN QUEST USING GAIN RATIO AS ATTRIBUTE  
SELECTION MEASURE TO NOWCAST SNOW/NO-SNOW**

**Paper ID-1156**

**A paper presented by:** Kishor Kumar Reddy C., Babu V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The main crux of the present research is to nowcast the presence of snow/no-snow more accurately by making use of historical weather datasets and decision tree approach. In this paper, a new algorithm named Improved Supervised Learning in Quest using Gain Ratio as Attribute Selection Measure (ISLGAS) is proposed. The proposed algorithm is compared with existing decision tree algorithms such as SLIQ, SPM, SLGAS, ISLIQ and ISPM in terms of the overall classification performance defined over four different performance measures namely accuracy, specificity, precision and error rate. Experimental results show that the ISLGAS algorithm scales up well to both large and small datasets with large number of attributes and class labels.

**EFFICIENT BIG DATA ANALYTICS WITH OPTIMIZED PARALLEL PROCESSING**

**Paper ID-1157**

**A paper presented by:** Sravanthi S., Thirupathi Rao K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Now a days the word MapReduce is synonymous with big data processing. Different flavors of it is available over Apache Hadoop being at the core of big data processing. For well versed Java developers there is the direct interaction with the core there is Hive for the SQL proficient one's and there is Pig for procedural language aware developers. What ever the wrapper being used the core implementation of hadoop is simply is to divide the processing into two disjoint phases. One being the Map function and the other being the reduce function. So far many big data processing implementations are driven with the idea of equal distribution of workloads across processing nodes. We propose a dynamic distributed algorithm that is a processing aware job scheduler that assigns data processing nodes work load based on their prior performance throughputs. Extensive simulations using a 2.4 GB weather temperature conversion datasets demonstrates that our proposals can significantly reduce processing costs while prioritizing working nodes better compared to previous approaches.

**PERFORMANCE OF INDIRECT MATRIX CONVERTER AS ASYNCHRONOUS LINK BETWEEN  
TWO AC SYSTEMS**

**Paper ID-1158**

**A paper presented by:** Lavanya N., Chandrasekhar O., Ramamoorthy M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper discusses an Indirect Matrix converter(IMC) topology used to supply a threephase load directly from three phase AC power source without using any large electrolytic capacitors in the intermediate dc link. The Indirect Matrix converter considered here, consists of an input stage and two output stages with a pair of voltage source inverters. An improved switching configurations is selected for the Inverters based on the output space vectors and its switching table is developed to minimise switching losses and output distortion. The dc link voltage for the rectifier stage is controlled by a new modulation technique to obtain maximum dc voltage with unity power factor (UPF) for the fundamental at the input side. The performance of IMC as an asynchronous link between two ac systems is proposed for different frequencies at the rectifier and inverter stages with bidirectional power flow. Also, the IMC is operated for multiple loads (active and passive loads)at variable frequencies. The performance of the IMC with the proposed modulation techniques are shown through simulation results.

**WIDEBAND CPW FED MONOPOLE FRACTAL ANTENNA WITH DEFECTED GROUND  
STRUCTURE**

**Paper ID-1159**

**A paper presented by:** Bhavani K.V.L., Khan H., Madhav B.T.P  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

For the exchange of high rate information, wide band antennas are needed and their usage increased tremendously now a days. One of the major challenges in the design of wideband antenna is the design of a small size antenna while providing wide bandwidth, omni-directional radiation pattern and stable gain. The proposed antenna consists of a monopole antenna with polygon shaped patch. Fractal elements are added to the polygon patch and defected ground structure is experimented for the enhancement of bandwidth. The size of the proposed antenna is  $25\tilde{A}$ — $25\tilde{A}$ — $1.6\text{ mm}^3$  and is prototyped on FR4 substrate whose permittivity is 4.4. The proposed antenna should provide wideband and it is useful for wireless communication applications.

**AUTOMATIC SPEED CONTROLLING OF VEHICLE AND DETECTION AND NOTIFICATION OF  
POTHoles AND HUMPS**

**Paper ID-1160**

**A paper presented by:** Sujitha M.V.S., Ramesh N.V.K., Kotamraju S.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Road maintenance is the major issue in the society. Due to load carrying vehicles and rains creates potholes and humps on roads. Recognition of the Pavements anguish such as humps and potholes is used for drivers to control the accidents. Automatic and detection and notification of potholes and humps is already done. Now in this study we are automatically controlling speed of vehicle when there is any pothole or humps to decrease accidents. Here, we calculate the distance of the pothole and humps and notify the driver to divert the direction of vehicle and also speed we control of the vehicle at that area. Here, we use Pulse Width Modulation to control the speed. Android device is used to get the alerts so that the driver can either slow down or divert the vehicle direction. We use DC motor to represent vehicle and MAX232 to connect DC motor to ARM7. Ultrasonic sensors are used to detect pothole or hump on roads.



**WORKLOAD ENERGY EFFICIENCY SCHEDULING FOR HETEROGENEOUS CLOUDS**

**Paper ID-1161**

**A paper presented by: Nagavalli T.S.**

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Now a days cloud computing provides utility of services to users in IT oriented services. There are more number of technologies were presented in cloud computing, MapReduce programming model is one of the critical technology in cloud. There is a novel scheduling algorithm Adaptive Task Allocation Scheduler (ATAS) for allocating non-identical tasks in MapReduce programming model in heterogeneous cloud. The ATAS adopts more accurate in to determine response time and backup tasks in heterogeneous cloud environment. However, most existing efforts in improving the energy efficiency of a cloud system focus on workload based allocation at the system. This study tries to address the energy efficiency with a new technique HTS (Hash based Task Scheduling) in a heterogeneous cloud system at the task scheduling level. It schedules tasks based on the index that is calculated while execution. So in this study we propose to develop an algorithm Task Scheduling with Hash based Sorting, it is a positional index based task scheduling algorithm in processing of different jobs in heterogeneous cloud environment with all proceedings of each process in parallel speculative execution in real time cloud environment. The experimental results show efficient task scheduling with positional sorted index in real time heterogeneous with CPU performance when compared to ATAS schema in real time cloud environment.

**A COMPOSITE REMOTE SENSING AND MONITORING METHOD FOR EFFECTIVE TRAFFIC  
MANAGEMENT**

**Paper ID-1162**

**A paper presented by:** Sastry J.K.R., Naveena Muralidhar T., Lakshmi Chandana Y., SasiBhanu J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

One of the major goals of developing countries is to build smart cities to avoid different kinds of congestions, accidents and many kinds of inordinate delays. The most important consideration is intelligent traffic management system. Many sub-systems are required which include visualisation, bio sensing, image processing, remote sensing, messaging, cognition and a communication system that caters for communication among several sub-systems of traffic management. Out of all these systems, remote sensing and monitoring plays a vital for effective wide area based traffic monitoring and control system. The type of sensing to be used for identifying an object which is met with an accident differs. Sometimes combinations of gadgets are to be used for implementing comprehensive remote sensing and monitoring system. In this paper a composite method is presented which considers all aspects related to communicating with remote objects that have been met with an accident and many other parameters that deal with monitoring and controlling the traffic at remote locations.

**DYNAMICALLY RECONFIGURABLE SMART TRAFFIC SYSTEM FOR ACCIDENT RESCUE  
OPERTAION**

**Paper ID-1163**

**A paper presented by:** Rajitha B., Muralikrishna B., Ram S., Sankar G.M., Madhumati G.L., Khan H.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Road accidents are a major cause of death and injuries causing disability throughout the world in both the developed and developing countries. Prevention of accident is quiet impossible but it can be reduced by proper design and control. To improve the reliability of public transport, this study proposes a Smart Traffic Control System (STCS). The main concept of STCS is to control real time traffic flow by distinguishing the emergency vehicle from other vehicles (green signal) at remote accident location to reach in time to hospital with the help of Vibration Sense Message Alert System (VSMAS). In proposed system, each vehicle includes VSMAS located inside the vehicle which senses the vibrations beyond the threshold level. When the vehicle collides, the information of remote location is updated to Emergency Service Centre (ESC). ESC connected to city traffic database automatically sends emergency vehicle to accident spot. In the path of emergency vehicle from origin to hospital via remote accident location, green signal and emergency signal are updated to confined traffic route. Traffic signal delays of the junctions will be modelled based on emergency vehicle movement controlled by ESC. RFID is attached to each traffic junction for estimation of congestion for smooth movement of emergency vehicle. The prototype was examined with various sequences of inputs in laboratory which demonstrates experimental results on Spartan3E FPGA.

**SOFTWARE ENGINEERING AND NATURAL LANGUAGE PROCESSING- HOW CAN THEY BE  
TOGETHER?**

**Paper ID-1164**

**A paper presented by: SHARMA N., YALLA P.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The SE and NLP are newer research areas in computer science and engineering. This paper tries to raise and answer the interrelation between Software Engineering and Natural Language Processing. The stakeholders of both the research areas which will be affected are provided. An attempt is made to highlight the possibility of joint research in both the areas.

**EVALUATION OF LOSS OF LOAD EXPECTED IN AN INTEGRATED ENERGY SYSTEM**

**Paper ID-1165**

**A paper presented by:** Bharath Kumar T., Sekhar O.C., Ramamoorthy M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The main objective of work presented in this paper is about the prediction of power availability in advance from Energy Sources. The wind is a highly variable energy source and behaves quite different than conventional energy sources. The participation of wind energy with conventional sources of generation is increasing rapidly and it is treated as integrated energy system. In the case of wind energy, velocity predictions are important to assess the power generation in future. The prediction of wind velocity in this paper is further helpful to estimate the reliability analysis of the system. The reliability analysis is done by evaluating the Loss of Load Expected (LOLE). The reliability analysis of complete system with incorporation of wind power along with conventional plants is achieved through prediction of wind power. Hence the loss of load expected to happen in future is helpful to take decisions. The wind velocity predictions are validated with the actual data collected from MOSDAC (Metrological and Oceanographic Satellite Data Archival Centre).

**A GERMANE PROGNOSIS PARADIGM FOR CLIMATE AND WEATHER RESEARCH**

**Paper ID-1166**

**A paper presented by:** Anisha P.R., Vijaya Babu B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Predicting weather is technically and scientifically an exigent task across the globe. This requires lot of perseverance and needs huge amount of dispensation of meteorological weather data, both numerical datasets and satellite imagery. This paper presents certain methodologies based on which an efficient mechanism is proposed for weather prediction. The mechanism makes use of both satellite imagery and numerical datasets which are analyzed through data mining techniques and image processing tools. The proposed framework involves various wavelet transformation algorithms and a comparative study is made to find the efficient algorithm for the prediction purpose. Further the methodology proposed also make use of numerical data where in one of the precipitant is considered and an experimentation is carried out to analyze various other precipitant resulting in the climatic condition. Further in order to identify the duration of the said weather condition and to find the intensity in case of any climatic calamity a framework is proposed to identify the cloud intensity by making use of the historical satellite data.

**A MODEL TO QUANTIFY AND IMPROVE SOFTWARE TEST AUTOMATION**

**Paper ID-1167**

**A paper presented by:** Jammalamadaka K., Ramakrishna V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

With test automation being a corner stone for improving quality of releases and with increased reliance on automation, automation framework and scripts being developed needs structured model to measure effectiveness of automation in areas of maintainability, reliability and extendibility. Also a need of a maturity model to guide and improve automation being developed arises. In this paper we proposed a model called Automation Reliance Model which fills in the space of quantitative measurement of automation development, and guides to improve same. This model is derived collating our experience with automation frameworks, script development and ideas from Capability Maturity Model integration [5], Failure Mode Effect Analysis [6] and Test Maturity Model integration [2] and also taking into account standard quality measures followed for Agile based implementations. Automation success depends not only on tools used and test harness, but on entire life cycle of implementation. Automation Reliance Model focuses on 3 phases' requirements, implementation (Design and development quality) and maintainability of automation. Automation Reliance Model defines a scale for automation quality though quantitative measurement based on standard metrics, and provides direction to improve.

**AN IMPROVED CPE LOCALIZATION ALGORITHM FOR NEIGHBOR NODE LOCALIZATION  
FOR WIRELESS SENSOR NETWORKS**

**Paper ID-1168**

**A paper presented by:** Brahmanandam N.S., Raghava Rao K., Mohanrao K.R.R., Prasad G.R.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The area is turning out to be progressively the center of examination in the field of remote sensor systems in Wireless Sensor Networks (WSNs), since information conveyed from a sensor is just helpful when it is the position of the sensor. In this work, we have proposed an enhanced area calculation Convex Position Estimation (CPE) that diminishes the mistake area without extra equipment and computational expenses. In the proposed plan, initially we assess the area of the sensor hubs utilizing arched position gauge (CPE), and after that refine the area of the sensor hubs utilizing the area of the stay hubs two jumps. The recreation comes about demonstrate that the new area calculation successfully enhances situating precision contrasted and conventional area calculations CPE.



**MULTISPECTRAL IMAGE FUSION USING INTEGRATED WAVELETS AND PRINCIPAL  
COMPONENT ANALYSIS**

**Paper ID-1169**

**A paper presented by:** Bhavana D., Rajesh V., Koteswara Rao C.H.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Fusion of visible and IR images is intended to merge input pictures into a fused image that is predicted to be a higher informative for human or machine sense as compared to any of the input pictures. Due to this advantage, Image fusion techniques have shown greater achievements in remote sensing, medical imaging, and visual sense applications. As expected, conventional techniques like simple averaging fusion, select maximum, select minimum algorithms shows degraded performance. The ringing tone given within in the fused image can be turned aside using wavelets with shift invariant property. The proposed fusion technique requires sub-band decomposition using 2D-Discrete Wavelet Transform (DWT) in order to retain both spatial and spectral information. An optimal variant of the daubechies wavelet family has been preferred experimentally for improved fusion results. The Daubechies wavelets family is used to divide the images into detail information and approximate information. The detail information from one image can be injected into another image using different techniques and different fusion rules. It has been concluded that image fusion using wavelets with greater level of decomposition showed superior performance.

**ALGORITHMS FOR ENERGY EFFICIENCY & COVERAGE PROBLEMS IN WIRELESS SENSOR  
NETWORKS**

**Paper ID-1170**

**A paper presented by:** Dongaonkar S., Srinivasu N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A wireless network consists of a large number of small sensors. The development in the field of wireless network has done remarkable growth. It has reached to many applications. The research in the sensors has given vital contribution many applications. Small sensors in large quantity make a wireless network. The sensors collect data and transmits it over the network to a centralized. The major problem with sensors is that they are very tiny and has limited power resource. They need to be recharged frequently. Since they are spread geographically at distinct places it is very difficult to recharge them. The main disadvantage of sensor being energy, many applications are written with the intent of utilizing the energy to maximum extent without loss of data being subject to energy. Apart from energy issue, small sized sensor components have coverage problem as well. Coverage is very well described as, it is the capacity of the device to observe, analyze and report the information perceived. This paper is focused on different algorithms and methods for improving coverage problems and energy efficiency in the field of wireless sensor network (WS).

**STRIP LOADED CLOSED LOOP RESONATOR BASED MULTIBAND DEFECTED GROUND  
STRUCTURED ANTENNA**

**Paper ID-1171**

**A paper presented by:** Rama Krishna T.V., Madhav B.T.P., Sri Rama Krishna T., Sravanthi K., Dinesh Gopi  
G.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A defected ground structured circular monopole antenna is designed and presented in this research. The proposed antenna utilized closed loop resonator strips on both sides of the feed line. The overall dimension of the antenna is around 28x24x1.6 mm on FR-4 substrate with dielectric constant 4.4. The experimental results of the prototyped antenna on ZNB 20 vector network analyser are showing good agreement with simulated results on FEM based HFSS tool. A parametric analysis of the proposed antenna with respect to change in rate permittivity is also presented in this research.

**NEW TECHNIQUES FOR TUNING OF PID LOAD FREQUENCY CONTROLLER OF  
INTERCONNECTED ELECTRIC POWER SYSTEM**

**Paper ID-1172**

**A paper presented by: Gopi P., Linga Reddy P.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper investigates new techniques for tuning of PID Load Frequency Control of multi area electric power system having different turbines. The gain values of controller are optimized using different Metaheuristic Algorithms. The robustness and validity of designed controllers were checked on multi area interconnected power system with various Step Load variations. Finally, the performance of proposed controllers was compared with conventional controller in MATLAB environment and from the result it has been proved that the proposed controller exhibits superior performance than conventional controller for various Step load and uniformly distributed random loads.

**"DIMINUTION OF EMISSIONS BY USING EGR VALVE IN IC ENGINE AND STUDY THE  
TEMPERATURE OF THE EXHAUST GAS ON VARIOUS LOAD CONDITIONS"**

**Paper ID-1173**

**A paper presented by:** Srinivas Sivakumar L., Narayana K.L.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This work is to review the looming of exhaust gas recirculation (EGR) to reduce the exhaust emissions, particularly NOX emissions under various load conditions. The major task of the proposed work includes calculation of CO, CO<sub>2</sub>, NOX, HC content in engine exhaust with and without the execution of EGR Valve under the submission of various loads. In this process we use the exhaust gas imminent from exhaust manifold and rerouting it to inlet manifold in order to reduce the maximum emission content. Engine without EGR are more pollutant and uses excess atmospheric air for combustion process. By implementation of EGR valve in the engine, the Partial exhaust gas is re-circulated again into the engine. The exhaust gas is first passed in EGR and mixed with the atmospheric air before entering into the Combustion Chamber. Hence the amount of fresh atmospheric air is reduced which in turns reduces the emissions (CO, CO<sub>2</sub>, HC, NOX etc.) is abridged and is analyzed by the gas analyzer. The process is very much Eco-friendly. Using exhaust gas recirculation (EGR) technique in engines, the emissions are very much reduced and also the temperature of the exhaust gases is measured by using an infrared thermometer.

**EXPERIMENTAL INVESTIGATION OF CI ENGINE PERFORMANCE AND EMISSIONS OF SOAP  
NUT SEED OIL AS BIODIESEL**

**Paper ID-1174**

**A paper presented by:** Jyothi Phaneendra P., Venkateswara Rao T.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The developing enthusiasm for biodiesel owing to the closeness in its properties in contrast with those of diesel energizes. Diesel motors worked on biodiesel have lower emissions of carbon monoxide gas, hydrocarbons, particulate, and air toxics than once worked on petroleum-based fuel. Biodiesel, a promising substitute as an option fuel has increased huge consideration because of the anticipated shortness of traditional fuels and ecological concern. In the present study soap nut seed oil is used as biodiesel. The soap nut seed oil is changed over into soap nut oil methyl ester known as biodiesel. The physical properties of soap nut seed oil, for example, density, flash point, Calorific value etc., were nearer to the diesel. This oil is blended with the diesel as proportions of S5, S10, S15 is tested at constant speeds in the diesel engine. Performance and emissions are calculated for these blends of soap nut seed oil. There is a little improvement in results using the blends and the emissions are also low compared to the diesel. The qualities got from the soap nut oil methyl ester is firmly coordinated with the estimations of routine diesel and can be utilized as a part of the current diesel motor with no adjustment.

**VISUALISATION METHOD FOR EFFECTIVE TRAFFIC MANAGEMENT WITHIN SMART  
CITIES**

**Paper ID-1175**

**A paper presented by:** Sastry J.K.R., Divisushma, Aslesh Y., Sasibhanu J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Visualisations systems play a great role in efficiently and intelligently managing the traffic especially in smart cities. The visualisation systems helps in reading the traffic ahead of the actual congestion and so makes the traffic flow smooth and clear. One of the major task however will be to position the visualisation systems in strategic locations and communicate with the same from different location such as traffic post, local and remote controlling stations. The visualisation system must be composite that it supports different visualisation mechanisms and intelligent that it must communicate using multiple modes of communication that uses different mediums which includes, optic fibre, wireless, cellular, satellite and microwave. In this study, a visualisation system that is composite and intelligent is presented that can be seamlessly implemented into a smart city system.

**ADVANCED TRAFFIC MANAGEMENT SYSTEM FOR SMART CITIES THROUGH BIO-SENSING**

**Paper ID-1176**

**A paper presented by:** Sastry J.K.R., Gayathri K., Sasi Bhanu J., Sai Sowmya S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

One of the major goals of developing countries is to build smart cities. One aspect of a smart city is to build efficient and intelligent traffic management system especially the road traffic that avoids congestions, accidents and many kinds of inordinate delays. Many factors are to be considered for effecting smooth traffic management system that includes the consideration of toxic gases surrounding traffic routes, visualization, Imaging, remote sensing, messaging and a cognitive decision making system. The Traffic management also requires a versatile communication system that facilitate communication among heterogeneous devices and systems. Toxic gases in and around the traffic are quite dangerous and effect the traffic in many ways. There should be a composite system that caters to sensing the toxic gases in around the signal post systems and regulate the traffic based on the extent of presence of the Toxic gases. In this study, a composite bio sensing system is presented that senses various kinds of toxic gases and regulate the flow of traffic based on the extent of presence of those gases.



**SQUARED EUCLIDEAN DISTANCE MATRIX: A HEURISTIC BASED APPROACH FOR CELL  
FORMATION APPLICATIONS**

**Paper ID-1177**

**A paper presented by:** Durga Rajesh K.V., Mukesh D., Harshavardhan M., Jaganadha Swamy R., Suresh  
Krishnasai G., Gopi K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper focuses on Cellular Manufacturing Systems (CMS) which is the Group Technology (GT) application. Cell Formation (CF) is one of the Crucial step in the design of CMS. The main objective of CF is to group machines and parts into cells. This paper proposes a new heuristic approach to obtain CF based on Squared Euclidean Distance matrix. For proposed method MATLAB Code is developed. Grouping Efficacy (GE) is considered as performance measure. Computational Experiments were performed with 5 benchmark problem sets taken from literature. Computational results demonstrate that the performance of proposed heuristic in terms of GE is better or equal with other Well-known existing algorithms.

**APPLICATION OF MAXIMUM ENTROPY METHOD FOR EARTHQUAKE SIGNATURES USING  
GPSTEC**

**Paper ID-1178**

**A paper presented by:** Revathi R., Lakshminarayana S., Koteswara Rao S., Ramesh K.S., Uday Kiran K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Spectral analysis of ionospheric disturbances of seismic origin will aid for the detection and prediction of the unavoidable natural disasters like Earthquakes. These disturbances for an earthquake occurred in Kawalu, West Java Indonesia with a magnitude of 4.3 on Richter scale was analyzed. The earthquake has occurred on 12th December 2013 at 7:02 hours universal time coordinate i.e at 12:32 hours local time coordinate. Maximum entropy method was applied on the ionospheric disturbances seen on the earthquake day. The enhancement in the energy of the ionosphere has a high value at the beginning. It had a slow initial decrement and then a rapid fall down is observed. The method may profoundly represent the effect impending earthquake.

**ANALYSIS OF SEISMO-IONOSPHERIC PERTURBATIONS USING MODIFIED COVARIANCE  
ALGORITHM**

**Paper ID-1179**

**A paper presented by:** Revathi R., Lakshminarayana S., Koteswara Rao S., Ramesh K.S., Uday Kiran K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Earthquakes are the most vulnerable disasters in nature and are inevitable. Electromagnetic detection of earthquakes using Global Positioning System (GPS) has lead to better understanding of our planet earth and related atmospheric systems. In the present work an attempt is made to analyze seismo-ionospheric perturbations for an earthquake which has occurred in Indonesia on 15th January 2014 with a magnitude of 4.5 on Richter scale.

**RESEARCH ISSUES AND CHALLENGES OF BIG DATA**

**Paper ID-1180**

**A paper presented by:** Radha K., Thirumala Rao B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Many of the Organizations are generating massive volumes of data ranging from Terabytes to Petabyte through different sources such as Social media sites (Face book, Flipkart, Quiclr, etc). To handle such a large amount of data Organizations are using analytical tools with respect to the interaction between cloud and big data. This paper presents big data issues and research directions towards the recent research work of processing of big data in cloud computing.

**A REVIEW ON ENHANCING MAP REDUCE PERFORMANCE WITH DATA LOCALITY IN  
HETEROGENEOUS ENVIRONMENT**

**Paper ID-1181**

**A paper presented by:** Radha K., Thirumala Rao B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Map Reduce is an emerging tool to process the massive volume of data. Various techniques are proposed to improve the Map Reduce performance in heterogeneous environments. Some of the techniques are discussed in this paper, such as data prefetching mechanism, Data locality aware scheduling methods are proposed. To support the map tasks data locality, Next-K-Node Scheduling (NKS) procedure is proposed. Dynamic Data Placement policy (DDP) for map tasks of data locality to assign data blocks. This algorithm is based up on the distinct computing capacities of nodes to assign the data blocks, thereby improving the data locality and decreases the additional overhead to improve the Hadoop performance. Regarding the Grep, the DDP can improve up to 32.1% with the average improvement of 23.5 and regarding Word count, DDP can be improved up to 24.7% with the average improvement of 14.5%. Anyhow, its performance is increased because of additional network traffic. Data Locality attentiveness is focusing on the Reduce Tasks scheduling, which are near to the Map Tasks. CoGRS algorithm is used to increase, Intermediate data locality. Reduce tasks are scheduled to the neighborhood map tasks. For every reduce task, this algorithm computes by the respective centre of gravity associated map tasks. Fine partitioning techniques calculates the cost of partitioning data. Input data is splitted into fixed number of partitions. Dynamic Fragmentation calculates the workload for the nodes and also executes the Reduce tasks and splits the intermediate data locally. This paper presents various techniques to improve Map Reduce performance in Heterogeneous environments through Data Locality by partitioning the intermediate data at the Reducer side.

**TRUSTED LOCATION BASED SERVICES USING KNN QUERIES IN IOT**

**Paper ID-1182**

**A paper presented by:** Padmaja B., Jayabhaskar M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In an IOT (Internet of Things) environment the location based services (LBS) is more useful. The kNN queries which retrieve the location dependent sensor data by k nearest sensor data items associated with a location. In this paper a new method proposed to efficiently process kNN query by selecting the access point with best distinction capability which reduces search area and to find real intruders from untrustworthy data. The query issuer can retrieve kNN's from nearby nodes because in this method, node cache trustworthy data items whose locations are near their own.

**A REVIEW ON DESIGN AND DEVELOPMENT OF HIGH RELIABLE HYBRID ENERGY  
SYSTEMS WITH DROOP CONTROL TECHNIQUES**

**Paper ID-1183**

**A paper presented by:** Srinivasa Rao G., Harinadha Reddy K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Hybrid Energy system is a combination of two or more different types of energy resources. Now a day this hybrid energy system plays key role in various remote area power applications. Hybrid energy system is more reliable than single energy system. This paper deals with high reliable hybrid energy system with solar, wind and micro hydro resources. The proposed hybrid system cable of multi mode operation and high reliable due to non communicated based controllers (Droop Characteristic Control) are used for optimal power sharing. Size of battery can be reduced because hydro used as back up source and Maximum power point Tracking also applied to solar and wind energy systems.

**QUARTER MODE SUBSTRATE INTEGRATED WAVEGUIDE ANTENNA WITH INVERTED L-STRIPS**

**Paper ID-1184**

**A paper presented by:** Phani Srinivas K., Madhav B.T.P., Vakula Devi N., Gowthami P., Nehru C., Bhargavi V.K.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper the square shaped antenna with dual L-shaped strips are added for alternative current path using substrate integrated wave guide(SIW) knowledge is presented. The proposed antenna has dimensions 50X50X1.6 mm<sup>3</sup> is designed on FR4 substrate with loss tangent  $\hat{\epsilon}''=0.02$  and dielectric constant of 4.4. An impedance bandwidth ranging from 8.3GHz to 10.5GHz is attained for the proposed antenna model which will cover the X-band and by using the two inverted L-strips at the excitation point of radiation patch the gain is enhanced. Prototyped antenna is tested on ZNB 20 vector network analyzer and observed the compared the results for validation.



**DIFFERENTIAL FED MIMO ANTENNA FOR WIDE BAND APPLICATIONS**

**Paper ID-1185**

**A paper presented by:** Khan H., Surendra L., Madhav B.T.P., Prudhvee Charan P., Chaitanya Sai G., Harish Kumar M.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper presents a differential fed monopole antenna with Multi Input Multi Output (MIMO) configuration. Two models are proposed for wide band communication systems with defected ground structure on the other side of the substrate. The basic model and the proposed modified model are showing excellent radiation characteristics in the wide operating band. The simulation results are carried with commercial electromagnetic tool HFSS and the antenna parameters are analysed and presented in this work. The proposed antenna is prototyped on FR4 substrate with dielectric constant 4.4 and the measured results on network analyser are compared with simulation results for validation. The polarization purity when compared with base model; the proposed model is showing better results especially at high frequency bands.

**ASCERTAINMENT OF WORMHOLE AND BLACK HOLE ATTACKS IN MANET USING DOWB  
ALGORITHM**

**Paper ID-1186**

**A paper presented by:** Kumar T.P., Srikanth V., Reddy B.L.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The omnipresent nature of mobile devices gaggle canvassers (researchers) into investigating how these expedients can be exploited and assimilated into education methods. Particularly, ad-hoc networks have been gaining attractiveness for applications requiring rapid deployment. Investigators have exasperated to propose protocols that will develop the quality of service for ad-hoc networks in the inimical wireless milieus. A lot of applications, predominantly army applications, oblige great security considerations. Consequently, the significant challenging issue is to guard ad-hoc networks from security assaults. The key property in ad-hoc networks is usage of exposed wireless medium for communion. Resulting that intruder feels easy to inauguration attacks by injecting, altering, tampering the data items. Each device in the network works as router as well host it makes confusion to insert a firewall device. Considering about different network layer attacks in MANETS principally two attacks cause big damage to communication over ad- hoc network. Those are wormhole or collider attack and black hole attack. In this article we propose a new algorithm to detect black hole and wormhole attacks in MANET. And we evaluate the performance using NS-2.

**DESIGN AND ANALYSIS OF SQUARE MODEL UNIT CELL FOR THE PREDICTION OF  
THERMAL CONDUCTIVITY OF FIBRE REINFORCED COMPOSITES**

**Paper ID-1187**

**A paper presented by:** Kamala Priya B., Ali M.A., Naga Sai Ram G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The main objective of this work is to predict effective thermal conductivities of Unidirectional Fibre Reinforced composites using Finite Element Method. To calculate the effective thermal conductivities of composite by considering the thermal conductivities of individual components (Fibre, Matrix) of composite, the Representative Volume Element of Square Fibre Mechanical Model is incorporated with the Finite Element Software Ansys 12. 0. The effect of Fibre type and Fibre arrangements of effective thermal conductivities in transverse and through thickness directions are examined. Taking Finite Element Method relevant to RVE, Thermal Conductivities of Fibre Reinforced Composites are calculated which perceived in the form of Square models with and without debond at Fibre Matrix interface are discussed. From the results, it is shown that the effective thermal conductivities of composites can be improved with voids in a matrix and random arrangement of Fibres in a Matrix.

**WAVELET BASED MOBILE LOCATION ESTIMATION USING RSS MEASUREMENTS**

**Paper ID-1188**

**A paper presented by:** Ramesh N.V.K., Kotamraju S.K., Venkata Ratnam D., Suresh N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper studies the location of the position method is developed by applying factual analysis on GSM base station (RSS) down link signal strength by using wavelet transform. The GSM received signal strength is converted in terms of wavelet bases and this method estimates the positioning of the mobile and personal tracking the position based systems are used to find a person or an object related to known position or a coordinate system. NLos propagation is the major source of errors. Hence In this paper we propose a new method to solve the problem. The proposed method integrates the location estimation and Localization as a technique to solve the complex and challenging problems. Besetting line-of-sight (LOS) and non-line-of-sight (NLOS) transmissions has recently attracted considerable attention in the wireless sensor network field an approach utilizing the factual analysis with the help of Haar wavelet transform to increase the GSM -position accuracy.

**CRUMB RUBBER UTILIZATION IN PAVEMENTS TO IMPROVE THE DURABILITY: AN  
EXPERIMENTAL STUDY**

**Paper ID-1189**

**A paper presented by:** Asadi S.S., NagaSeshu Babu T., Harish Kumar B., Sumanth M., Sumanth Kumar G.,  
Harsha Vardhan S., Khasim Khan P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Globally 15 million tones of waste tyres are produced and India also contributes approx one million tyres yearly. Due to heavy use of vehicles from past two decades, the waste tyre has become a big problem for health of mankind and also environmental complications since they are non-biodegradable. Also the disposal of unused waste rubber is a problem too. So, the paper is to study the possibility of waste tyre rubber as a mixing material in the bitumen, which is used for pavement construction. If the unused tyre rubber is added in the bitumen partially, it improves the performance and characteristics of bituminous pavement. Crumb rubber acquired from scrap tires has ended up being a compelling added substance for changing the properties of black-top folios as Crumb Rubber Modified Asphalts (CRMAs). Subsequent to the properties of CRMAs change principally because of various unrefined bases, Vast usage of rubber tyres results in enormous crumb rubber In this paper a percentage (10%) of CR (passing from 600 microns sieve)is used from the total weight of bitumen. Therefore it will be beneficial in reducing the bitumen content in the pavement construction, which is economical and usage of unused tyre rubber which reduces the environmental pollution. By laboratory examination we found that strength of the design was amplified.

**INFLUENCE OF STEEL FIBERS AS ADMIX IN NORMAL CONCRETE MIX**

**Paper ID-1190**

**A paper presented by:** Kishore I.S., Chowdary Ch.M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In recent days the usage of concrete has been increased all over the world. Hence it is important to study the mechanical properties of concrete on addition of mineral admixtures. Our main motive is to know the compression behavior of concrete when different types of mineral admixtures added to the concrete. The mineral admixture we are using in this study are steel fibres. In this study we are casting 6 cubes and 6 cylinders out of which 2 each for 7, 14, 28 days. The percentage addition by weight of concrete for mineral admixtures used are 2% and 4%. We are going to compare the results of compression strength and split tensile strength of concrete with normal concrete when admixtures are added to the concrete with different percentages. The experimental study on normal strength concrete grade for 2% and 4% cube were also prepared respectively.

**REMOTE MONITORING OF HEART BEAT AND BODY TEMPERATURE OF A PERSON USING  
PPG AND GSM**

**Paper ID-1191**

**A paper presented by:** Mohan Rao K.R.R., Sai Nikhil M.V.S., Vamsi Krishna Mangalampati K.S.S.R., Rama  
Krishna T.C.B.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The need of doctor is very essential for proper patient care. But he may not be present in every place to provide treatment immediately. So the right solution is the remote monitoring of patient's health. The major problem in remote monitoring is the unavailability of proper internet connection in remote areas. So this made us to use a GSM module for our project as the telecommunication network is spread globally. This system monitors physical parameters like heart beat, body temperature and sends the measured values directly to a doctor through an SMS. The system has been realized using software modules and later through hardware circuit. Our project utilizes the system hardware consisting of a heartbeat sensor, microcontroller interface circuit and a GSM MODEM. Also, the design for the software has been presented through the use of GSM AT commands. This system uses the AT89C52 microcontroller unit with rich internal resources to meet the necessities of the system for handy operation. Our device can even measure heartbeat ranging from a baby to an adult. The low cost of the device will help us to provide suitable home based effective monitoring system.

**DESIGN OF UHF ANTENNA FOR WIRELESS APPLICATIONS USING DEFECTIVE GROUND**

**Paper ID-1192**

**A paper presented by:** Immadi G., Narayana M.V., Reddy C.S.S., Sivani P.J., Anil Kumar P.V.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this article, we describe a novel type of defective ground surface (DGS) microstrip antenna which has higher gain, multi resonant frequency with compact size. It consists of hexagonal shaped patch with small volume and the ground plane is cut into six triangular slots just below the corners of the hexagonal patch. Antenna is circularly polarized one with gain 3.6dBi. The antenna shows multi resonant frequency. The proposed antenna is simple in structure compared with coplanar parasitic patch antennas. It is mostly suitable for wireless communications. slots is placed for improving the bandwidth.



**GPS WATER VAPOUR CONTENT VARIATIONS DURING HEAT WAVE OCCURRED DURING  
MAY, 2015 OVER SOUTH INDIAN REGION**

**Paper ID-1193**

**A paper presented by:** Venkat Ratnam D., Sri Sai Chaithanya K., Ramalingeswara Reddy M., Yamini M.,  
Sridhar M.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Water vapour has a great importance in understanding climate change, weather forecasting and also important weather forming elements of the troposphere. A limiting error source in geodetic measurement is unmodelled electrical path delay from atmospheric water vapour. To rebuild a spatially determined humidity fields in the troposphere a GNSS water vapour topography structure is established. GPS has a utility of precise 3-D positioning. With quick growth and widespread use of GPS equipment, developing the perceptible water vapour of troposphere from the information gathered by the GPS which became innovatively noticeable technology. To get precise information and derive perceptible water vapour so as to offer better services, proper operation technique is required. We discussed in this paper about the change in water vapour over the region in South India where heat wave has occurred.

**PERFORMANCE ANALYSIS OF SMALL ANTENNA WITH SLOTTED MEANDER-LINE  
RESONATOR AND DEFECTIVE GROUND FOR WIRELESS APPLICATIONS**

**Paper ID-1194**

**A paper presented by:** Narayana M.V., Immadi G., Khan H., Karthik K.V., Babu G.H., Pruthvi Kumar Reddy  
P.V.S., Sahithi V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Day by day with the increasing of demand for long distance communication resulting in requirement of many antenna elements on a single structure and if we do so there is a problem of coupling between those elements which reduces the antenna efficiency. So a new methodology to improve the isolation in micro strip patch antenna arrays is described through the implementation of a slotted meander-line resonator (SMLR) which is creating defect in the micro strip structure. The resonator is designed to suppress the surface current between the two patch antennas coupled along Hplane and operating at a frequency of 5 GHz which is used in microwave links and airborne RADAR applications. The configuration has been designed, simulated and validated experimentally.

**VIDEO COMPRESSION ON H.264/AVC BASELINE PROFILE USING NOVEL 4 $\times$ 4 INTEGER  
TRANSFORM**

**Paper ID-1195**

**A paper presented by:** Senapati R.K., Srikanth G., Sujeeth K., Balaji G.S.V.V., Prasad S.J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The H.264/AVC is the newest and present standard for video coding. The H.264 standard is developed from the same mixed composition as of before standards, but contains several new coding techniques that increase the efficiency and quality of the video compression. H.264 video coding standard specifies different methods of approaches for video compression, which are termed as profiles, aiming particular applications that are required. In this paper, we proposed a 4 $\times$ 4 novel Integer transform, which is derived from the basic 4 $\times$ 4 DCT kernel by applying signum function to the float DCT kernel. The proposed transform is applied to the base line profile of H. 264 for evaluation of the compressed video quality. We have considered Mean Structural Similarity (MSSIM) metric for evaluation. Extensive simulation conducted on various types of videos show that the proposed transforms outperform the H.264 by a wide margin. Further, the proposed 4 $\times$ 4 IDCT requires 25% less computation than H.264 standard and 45% less computation than Int. discrete Tchebichef transform (IDTT).

**ANALYSIS FOR THE PROCESSING TIME AND BEHAVIOUR OF BLACK HOLES IN MOBILE  
ADHOC NETWORKS**

**Paper ID-1196**

**A paper presented by:** Mahesh N., Jayakanth P., Krishna Saketh A., Nageswara Rao P., Mohan Rao K.R.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Mobile Adhoc Networks (MANETs) are much useful in emergency because they are fully distributed. And they can maintain them self and they are fully powerful and dynamic topology networks also they don't need any external infrastructure to run. But the propogation of these MANET based application was conjusive because their features though impart high applicable and that is unreliable. Also another cause for the unreliability is the mutual intrinsic trust during communication. One such attack exploiting this trait is named the Black Hole attack whereverin the region within the network promises routing of the info packet to the destination whereas in actuality it drops them thus decreasing dependableness. Here we did analysis on MANETs under single black hole attack and collaborative black hole attack and preventing the network by avoiding traffic away from black hole. The MANETs therefore mentioned use the AODV routing protocol and therefore the technique therefore projected is based on causing confirmation packets that area unit verified by the destination to ascertain for part presence within the GAODV routing protocol therefore projected. The GAODV formula was then simulated in each static likewise as mobile node atmosphere and it had been determined that its knowledge delivery magnitude relation is considerably better than the traditional AODV.

**ADAPTIVE MOBILE MESH NETWORKS**

**Paper ID-1197**

**A paper presented by:** Mohan Rao K.R.R., Purna Sankar D., Mekala J., Sai Sandeep P., Mounika T.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

These days' mobile ad hoc networks play a most vital role in the network communication technologies. To diminish the network partitions we have designed MANETs which are robust in nature. As independent mobile users move in a MANET (Mobile Ad hoc Network), due to the rapid and unpredictable change in network topology, the network portions alternately get partitioned. This situation is contrary, mainly for mission-precarious applications like crisis management. To overcome this situation we introduced AMMNET (Autonomous Mobile Mesh Networks), distinct to usual mesh networks, the mobile mesh nodes of an AMMNET have the capability of following the mesh clients in the 333 application topography, and also to get organized among them into a suitable network topology to confirm efficient connectivity for both intra and intergroup communications. The proposed solution is a scattered client tracking solution to compact with the dynamic nature of client mobility, and present methods for dynamic topology variation in accordance with the mobility design of the clients. By using AMMNETs though we get efficient communication without any loss of information there is increase in number of routers, hence, to prevent this difficulty we address this interesting problem in the project by introducing the concept of Mobile Mesh Networks. We will use the popular simulator (NS2) to simulate our proposed system

**ANALYSIS OF CIRCULARLY POLARIZED NOTCH BAND ANTENNA WITH DGS**

**Paper ID-1198**

**A paper presented by:** Raman Y.S.V., Madhav B.T.P., Mounika G., Sai Teja K., Sai Kumar S.B.V.N., Sri Harsha K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A compact printed wideband antenna with circular polarization is analyzed in this work. A basic structure of rectangular monopole is converted into a trapezoidal shape with tapered step ground. Different iterations of radiating element as well as defected ground structures are examined in this work to analyze the circular polarization characteristics of the antenna. A peak realized gain of 4.3dB and peak directivity of 3.8dB is attained from the current designed models. The design models are simulated on HFSS tool and the optimized dimensions are prototyped on FR4 substrate for measurement validation. By incorporating Split ring resonator (SRR) notch band characteristics are attained in the proposed wideband antenna.

**ON COMPUTING WEB ANALYTICS FOR GENERATING USAGE STATISTICS**

**Paper ID-1199**

**A paper presented by:** Sastry J.K.R., Nithin Y., Vyshnavi M.L., Sai Keerthi N., Lakshmi Anvitha A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Many web sites are in vogue, which are hosted by many business establishments' world-over. Many users browse through the web site for their information requirements and understanding. Some of the users frequently visit the WEB site for their daily information requirements. Users loses lots of time and energy in looking for the information that they need when the WEB site are loosely designed and takes quite a time in navigating through different hyperlinks so as to arrive at the page which contains information needed by them. The WEB sites have to be designed and developed in such way that browsing can be done in easiest manner. It is necessary to analyse the way the users wants to use the WEB site and use the analysis for improving the design and implementation of the WEB sites. Efficient WEB analytics are to be identified and computed that reflect the effectiveness of the WEB sites and also provide foundations and insights into improving of the WEB sites. This paper presents efficient WEB analytics and the related computational aspects that determine the WEB usage. A model is also presented that help determining the improvements in the design and implementation of the WEB sites. The WEB analytics are computed for an existing WEB site and has been shown in the paper, the way the WEB analytics have been improved after the WEB site has been modified based on previously computed analytical values.

**RELIABILITY MODELLING OF POWER SYSTEM COMPONENTS THROUGH ELECTRICAL  
CIRCUIT APPROACH**

**Paper ID-1200**

**A paper presented by:** Bharath Kumar T., Sekhar O.C., Ramamoorthy M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The reliability of the electrical power networks is essential for the continuous power supply to the consumers. The assessment of reliability in interconnected power systems is complex in nature due to the large number of components and network topology. In this paper, a new approach based on electrical circuit analogy for reliability modelling of power system is presented. This electrical circuit approach for the reliability modelling gives the probability of power availability at the load bus. This is one of the reliability indices used to assess the quality of power system. In this analysis two methods are proposed one through Seriesparallel equivalent and star-delta conversion approach and another method is based on classical node elimination approach. The Classical node elimination method is used for power system analysis and has not been used so far for reliability analysis. This is the first time the classical node elimination method for reliability analysis in interconnected power system is adapted. The Electrical circuit approach is also helpful to find the System Average Interruption Duration Index (SAIDI) and Customer Average Interruption Duration Index (CAIDI) if the relevant data for each customer served by the load bus is known. The IEEE 6-bus system is used as an example to obtain the probability of power availability at the load bus in this paper. The result obtained from both methods shows the effectiveness of the proposed electrical network approach. The average power availability computed from the equivalent failure and repair rates obtained by the electrical circuit approach is also compared with the result obtained using Monte Carlo procedure from the histograms generated. Also to show the adaptability of proposed method for large system, the results obtained for IEEE 14 bus system are presented.



**OPTIMIZATION STUDY ON QUARTER CAR SUSPENSION SYSTEM BY RSM AND TAGUCHI**

**Paper ID-1201**

**A paper presented by:** Sreekar Reddy M.B.S., Vigneshwar P., Rajasekhar D., Akhil K., Lakshmi Narayana Reddy P.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper presents on optimal vehicle seat suspension design for a quarter car model to reduce vibrations. With the aid of MATLAB/Simulink a simulation model is achieved. As the response surface methodology is a traditional technique for experimental process optimization. Recently a new approach to this problem has been tried with response surface methodology and Taguchi which is new in the statistical field. For the Response surface methodology, an experimental design was chosen in order and optimized for controlling parameters. Simultaneously, Taguchi optimization technique is implemented to know the effect of parameters over response.

**DESIGN AND IMPLEMENTATION OF EFFICIENT LOW COMPLEXITY BIOMEDICAL  
ARTIFACT CANCELLER FOR NANO DEVICES**

**Paper ID-1202**

**A paper presented by:** Rahman M.Z.U., Sultana A., Srikanth B.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In the current day scenario, with the rapid development of communication technology remote health care monitoring becomes as an intense research area. In remote health care monitoring, the primary aim is to facilitate the doctor with high resolution biomedical data. In order to cancel various artifacts in clinical environment in this paper we propose some efficient adaptive noise cancellation techniques. To obtain low computational complexity we combine clipping the data or error with Least Mean Square (LMS) algorithm. This results sign regressor LMS (SRLMS), sign LMS (SLMS) and sign LMS (SSLMS) algorithms. Using these algorithms, we design Very-large-scale integration (VLSI) architectures of various Biomedical Noise Cancellers (BNCs). In addition, the filtering capabilities of the proposed implementations are measured using real biomedical signals. Among the various BNCs tested, SRLMS based BNC is found to be better with reference to convergence speed, filtering capability and computational complexity. The main advantage of this technique is it needs only one multiplication to compute next weight. In this manner SRLMS based BNC is independent of filter length with reference to its computations. Whereas, the average signal to noise ratio achieved in the noise cancellation experiments are recorded as 7.1059dBs, 7.1776dBs, 6.2795dBs and 5.8847dBs for various BNCs based on LMS, SRLMS, SLMS and SSSLMS algorithms respectively. Based on the filtering characteristics, convergence and computational complexity, the proposed SRLMS based BNC architecture is well suited for nanotechnology applications.

**MULTIBAND SLOT APERTURE STACKED PATCH ANTENNA FOR WIRELESS  
COMMUNICATION APPLICATIONS**

**Paper ID-1203**

**A paper presented by:** Madhav B.T.P., Ujwala D., Khan H., Reddy K.M.K., Gorijala D., Kishore D.L.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A novel slot aperture stacked patch antenna is presented for wireless communication applications and its performance evaluation is examined with change in the dimensions of radiating elements. Stacked patch antenna is proposed to increase the narrow bandwidth, radiation efficiency and directivity. The antenna consists of one driven patch and one parasitic patch on two dielectric substrates of RT-duroid ( $\epsilon_r = 2.2$ ) and FR4 ( $\epsilon_r = 4.4$ ) materials. The antenna behavior is explained through parameter study using finite element method and output parameters are presented in detailed manner.

**SOFT SWITCHING OF INTERLEAVED BOOST CONVERTER FED PMBLDC MOTOR USING PI  
AND FUZZY CONTROLLERS**

**Paper ID-1204**

**A paper presented by:** Ramesh V., Kusuma Latha Y., Chandra Sekhar O.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper proposes an improved interleaved boost converter topology for soft switching of VSI fed PMBLDC motor. Six switch and four switch converter configurations are employed for the proposed boost converter under Zero voltage switching and Zero current switching. The proposed boost converter for PMBLDC motor under various operating condition are implemented in MATLAB/SIMULINK environment. The feasibility of six switch and four switch converter by for PMBLDC motor is explored. A comparative evaluation of speed control of six switch and four switch inverter with fed PMBLDC motor PI and FUZZY controllers has been made discussed in this paper.

**MODIFIED HYBRID PWM TECHNIQUE FOR NEUTRAL POINT STABILIZATION OF FIVE  
LEVEL DIODE CLAMPED INVERTER**

**Paper ID-1205**

**A paper presented by:** Narasimharaju K., Chandrasekhar O., Padmasri G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

An intrinsic problem with diode clamped multi-level inverter is fluctuations or simply called unbalance of voltage at neutral point. This voltage fluctuations can cause uneven voltage sharing among the switching devices. Sometimes may cause failure and increases harmonic component in the output waveform. This problem is normally mitigated by closed loop control of neutral point voltage. There are many mitigation methods well established in literature to balance the neutral point voltage using conventional SPWM and space vector PWM techniques. But these techniques has drawbacks like low frequency ripples at the neutral point and high switching losses. So This project deals with the new control technique for balancing the neutral point voltage i.e. With the combination of both SPWM and SVPWM techniques to the fullest for achieving efficient voltage balance at the neutral point by providing quality output for 5 level diode-clamped multi level inverter for any type of load. MATLAB-SIMULINK will be used to develop this technique.

**FUZZY HUKUHARA DELTA DIFFERENTIAL AND APPLICATIONS TO FUZZY DYNAMIC  
EQUATIONS ON TIME SCALES**

**Paper ID-1206**

**A paper presented by:** Vasavi C., Suresh Kumar G., Murty M.S.N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Using the concept of Hukuhara difference, in this paper we introduce a class of new derivatives called Hukuhara delta derivative and a class of new integrals called Hukuhara delta integral for fuzzy set-valued functions on time scales. Moreover, some corresponding properties of Hukuhara delta derivative and Hukuhara delta integral are discussed. Furthermore, sufficient conditions are established for the existence and uniqueness of solution to the fuzzy dynamic equations on time scales with the help of Banach contraction principle.

**MODIFIED GROUPING EFFICACY AND NEW AVERAGE MEASURE OF FLEXIBILITY:  
PERFORMANCE MEASURING PARAMETERS FOR CELL FORMATION APPLICATIONS**

**Paper ID-1207**

**A paper presented by:** Durga Rajesh K.V., Chalapathi P.V., Chaitanya A.B.K., Sairam V., Anildeep N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In cellular manufacturing, formation of cell is a complex and crucial step to increase the machine utilization and productivity of an organisation. Binary format or ordinal data are given as input for the part-machine incidence matrix of the cell formation problem. The cell formation problem may contain two or more solutions due to its ill structure. These solutions may be compared using performance measures and the optimal solution can be identified. A standard measure known as Grouping Efficacy produce some conflicting results in some ill structure data. In this paper a new performance measure in binary data known as Modified Grouping Efficacy (MGE) is introduced to nullify the conflicting results obtained by standard Grouping Efficacy. Similarly there are only very few performance measures used as standard measures for ordinal data like GT Efficacy and Global Efficiency. However, these performance measures can lead to subjective decisions which reduce productivity of the organisation. So, in order to improve productivity we have taken a new objective measure known as New Average Measure of Flexibility (NAMF). The advantages of both proposed performance measures are demonstrated by comparing with existing performance measures.

**MITIGATION OF GPS MULTIPATH EFFECTS USING ADAPTIVE NORMALIZED LMS  
ALGORITHM**

**Paper ID-1208**

**A paper presented by:** Sridhar M., Sai Krishna C.H., Jaya Sai Reddy K., Manikrath Kumar M., Sri Lakshmi  
N., Venkata Ratnam D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The objects surrounding the GPS receiver easily distorts the satellite signal. With the increasing Global Navigation Satellite System (GNSS) based applications, they require reliable and accurate navigation solutions in challenging environments such as urban communities. In such situations, receiver accuracy and reliability are restricted due to multipath signals. Multipath is the phenomenon of propagation in which the signals traveling through two or more paths are received by the receiver. Multipath signals are those received signals other than LOS signal by antenna. Multipath signal is the combination of the direct as well as indirect signal. Finally, multipath leads to poor measurement accuracy and fading. In this paper Normalized LMS adaptive filter algorithm is mainly used to mitigate multipath signals. Other adaptive filters are also have been implemented to compare the results.



**MULTIBAND MSP SPIRAL SLOT ANTENNA WITH DEFECTED GROUND STRUCTURE**

**Paper ID-1209**

**A paper presented by:** Phani Srinivas K., Khan H., Madhav B.T.P., Tejaswi M., Feroz S., Durga Madhuri P.,  
Mahesh M.V.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Defected ground structures are one of the key important structures to attain multiband characteristics in the microstrip antennas. In this paper, spiral shaped defected ground structures are proposed to improve the performance of different passive circuits, including dual, triple and multiband characteristics and to suppress harmonics in the patch antennas. The proposed defected ground structure monopole antenna is resonating at multiband with size reduction to perform LC resonant property in the operating band. By incorporating defected ground structure in the antenna model, additional resonant frequencies are attained due to the abrupt change in the current path of the antenna. The proposed antenna is prototyped on FR4 substrate and measured results are obtained from ZNB Vector Network Analyser. The simulated results are in good agreement with measured results of the fabricated antenna model.

**COMPARISON CHARACTERISTICS OF DSR AND AODV PATHING INSTRUCTIONS**

**Paper ID-1210**

**A paper presented by:** Mohan Rao K.R.R., Naga Kiranmai G., Vikas N., Murari A.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Best efficient network system has the selection of proper routing of the path and its protocol. At movable Adhoc System the chosen Instructions taught to better as far as information conveyance and information respectability. Thus, the execution investigation of the protocol s is the significant stride before selecting specific protocol. Route development ought to be finished with at least overhead and transmission capacity consumption. In this paper, the execution investigation is done on an Adhoc On-demand Routing Vector and Dynamic Source Routing taking into account an sequence of parameters.

**ANALYSIS OF FADING EFFECTS DUE TO IONOSPHERIC SCINTILLATIONS USING MODERN  
GNSS SIGNALS OBSERVED AT NORTHERN LOW LATITUDE STATION**

**Paper ID-1211**

**A paper presented by:** Sridhar M., Venkata Ratnam D., Uday Bhaskar T., Leela Prasanna A., Rohit B.,  
Ramaraju A.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The major threat to Global navigational system's signal availability, accuracy, and processing is the signal fading caused due to ionospheric scintillations. In this paper the triple - frequency data of GPS signal collected at Koneru Lakshmaiah University, Guntur, India is processed to analyze the signal fading characteristics of GPS signal bands. Ionospheric scintillation parameter known as fade duration is calculated using GPS C/N0 measurements. It is observed that maximum fade duration is about 90 sec. It is evident that the L5 signal fading intensity is low as compared to L1 and L2 signals. The outcome of this work would be useful for developing inter-frequency aiding algorithms used in signal tracking and reacquisition in future GNSS receivers.

**ESTIMATION OF DOPPLER SPREAD FADING USING MODIFIED JAKE'S MODEL**

**Paper ID-1212**

**A paper presented by:** Ramesh N.V.K., Aravind D.V.R.Y., Pallavi G., Uma Alekhya K., Tejaswi M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Vehicular networking is a developing range of networking in the middle of vehicles and including roadside equivalence base. Progress in remote interchanges are making imaginable sharing of data through constant equivalence. Two courses for adjusting the established Jake's blurring test system to create different uncorrelated blurring convolutions are proposed. The order measurements of single yield convolutions of probability density function and autocorrelation are determined and are appeared to concur good with hypothetical desires. The cross relationship among various convolutions is about 0. The aim of this paper is to distribute excellent peer-reviewed papers in the territory of vehicular communication.

**CIRCULAR MONOPOLE SLOTTED ANTENNA WITH FSS FOR HIGH GAIN APPLICATIONS**

**Paper ID-1213**

**A paper presented by:** Madhav B.T.P., Chaitanya A.V., Jayaprada R., Pavani M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A coplanar waveguide feed wideband antennas are designed with slots on the radiating element and stubs on ground plane. Proposed model 1 exhibiting notch band characteristics at desired frequencies (3.5-4.5 GHz, 7.5-8 GHz) and model 2 is designed to operate in the ultra-wide band region. To enhance the gain characteristics of the proposed models incorporated a mushroom structured like frequency selective surface as reflecting device beneath the antenna structure. By placing FSS structure a stable gain of 7dB is attained from model 1 and 5dB in model 2. The experimental results of the proposed wide band antenna of model 1 are in good correlation with the simulated results from HFSS.

**PERFORMANCE ESTIMATION OF MICROSTRIP ANTENNA WITH SIERPINSKI GASKET  
INVERTED FRACTALS**

**Paper ID-1214**

**A paper presented by:** Asa Jyothi G., Hema Pushpika B., Siva Sankar P., Sai Ramya G., Priyanka G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In many commercial and defence communication systems, there is a need of compact antennas with high performance, considerable gain and compactness in size. The modern communication systems need such antennas which operates at multiband with wide bandwidth. One of the technique to satisfy that needs is the implementation of fractal geometry on the microstrip antenna radiator. It has been proved that fractal antennas have their own unique characteristics without changing the antenna properties. In the current paper, the performance of the microstrip patch antenna with Sierpinski gasket fractals as inverted triangles has been presented. The base antenna without fractals has been designed at 8.45GHZ operating frequency. As the base antenna offers narrow band width with single resonant frequency, triangular fractal geometry was implemented on the patch upto the second iteration to improve the gain and wide band width at multi bands. The fractal antenna characteristics are analysed at each iteration by using electromagnetic simulator HFSS 13.

**ADVANCED MOTION TRACKING BASED MOBILITY ASSISTANCE FOR PHYSICALLY  
DISABLED**

**Paper ID-1215**

**A paper presented by:** Satyanarayana P., Sai Prajwal K., Chandra Naga Varma T., Sri Manojna E., Sitara S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In present-day scenario, many people aren't able to control powered wheel chair using various interfaces like joystick, head control or voice control. For this reason, a new image-processing based mobility assistance system is proposed in this paper that automatically tracks the leg movement of the assisting person and follows him accordingly. In addition to this, an eye tracking feature has been inculcated into the proposed system that would help the disabled person in controlling the movement of wheel-chair using eye movement in the absence of an assisting person. The leg tracking module has been devised using the background subtraction and CamShift algorithms while the eye-tracking module utilizes the Haar cascades along with the Daugman's algorithm to track the eye-movement.

**FLOWER IMAGE SEGMENTATION: A COMPARISON BETWEEN WATERSHED, MARKER  
CONTROLLED WATERSHED, AND WATERSHED EDGE WAVELET FUSION**

**Paper ID-1216**

**A paper presented by:** Inthiyaz S., Madhav B.T.P., Kishore Kumar P.V.V., Vamsi Krishna M., Sri Sai Ram  
Kumar M., Srikanth K., Arun Teja B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Watershed Transformation is one of the powerful tools for image segmentation. Watershed transformation based segmentation is generally referred to marker controlled segmentation. This paper proposes a new approach of image segmentation that includes histogram equalization and image smoothing techniques with the Prewitt or sobel edge detection operator. The results when compared with the previous method, shows that this can achieve more accurate segmented results and can reduce the over segmentation effect.



**DESIGN AND SIMULATION OF ENERGY HARVESTING SYSTEM USING PMN-PT AND PZT-5H  
INTEGRATED WITH SILICA**

**Paper ID-1217**

**A paper presented by:** Nagakalyan S., Narayana K.L., Raghu Kumar B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper, author made an attempt to maximize the power output in the different piezoelectric materials in a unimorph cantilever beam configuration. In the present study, an attempt has been made to macro -scale unimorph piezoelectric power generator prototypes consists of an active piezoelectric layer, silver substrate and Silca base was designed for frequencies 60 Hz - 200 Hz. An analytical model of a micro power generator is used to obtain displacement, voltage and generated power which are the figures of merit for energy harvesting. This model is presented for three different piezoelectric materials like, PZT-5H and PMN-PT with and without silica base. The designed unimorph piezo energy harvesting system was modeled using COMSOL multi physics and the observed parameters are compared with analytical results.

**OBSERVATION OF IONOSPHERIC DISTURBANCES FOR EARTHQUAKES (M>4) OCCURRED  
DURING JUNE 2013 TO JULY 2014 IN INDONESIA USING WAVELETS**

**Paper ID-1218**

**A paper presented by:** Revathi R., Lakshminarayana S., Koteswara Rao S., Ramesh K.S., Uday Kiran K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Seismo-ionospheric perturbations are extensively studied for large earthquakes occurred over various parts of the world. Specific signatures of these natural events are observed in the Total electron content (TEC) data prior to their occurrence. Analysis of these natural disasters occurring at a specific location will help in their accurate detection and prediction. In this paper the Java region of Indonesia comprising of a belt of volcanic mountains, where a considerable number of events to analyze their characteristics in the ionosphere are considered for study. This region of Indonesia has an International Global Navigation Satellite System Station at Bakosturnal, Indonesia. Vertical total electron content data on the earthquake day is analyzed for 13 events occurred during June 2013 to July 2014.

**TAPERED SLOT CPW-FED NOTCH BAND MIMO ANTENNA**

**Paper ID-1219**

**A paper presented by:** Lakshmi M.L.S.N.S., Madhav B.T.P., Khan H., Sai Sri Vasanthi N., Bamra A., Krishna G.V., Pavan Srikar N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A coplanar waveguide fed notch band antenna is proposed in this paper to notch WLAN operating band. A tapered step ground with notched circular patch is used in the proposed antenna design to get notch band characteristics. Half wavelength slits are introduced inside the tapered slot ground and in the circular patch respectively. An FR4 substrate material is used to prototype the proposed model and measured the S-Parameters on ZNB 20 vector network analyser. The modified model is notching the band from 4GHz-7GHz in which WLAN operating band is there. The proposed antenna has lower cross polarisation with excellent impedance bandwidth in the operating band.

**FACE RECOGNITION BASED ATTENDANCE MANAGEMENT SYSTEM WITH RASPBERRY PI 2  
USING EIGEN FACES ALGORITHM**

**Paper ID-1220**

**A paper presented by:** Gaddam S.C., Ramesh N.V.K., Dhanekula H.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In recent trends industries, organizations and many companies are using personal identification strategies like finger print identification, RFID for tracking attendance and etc. Among of all these personal identification strategies face recognition is most natural, less time taken and high efficient one. It's has several applications in attendance management systems and security systems. The main strategy involve in this paper is taking attendance in organizations, industries and etc. using face detection and recognition technology. A time period is settled for taking the attendance and after completion of time period attendance will directly stores into storage device mechanically without any human intervention. A message will send to absent student parent mobile using GSM technology. This attendance will be uploaded into web server using Ethernet. This raspberry pi 2 module is used in this system to achieve high speed of operation. Camera is interfaced to one USB port of raspberry pi 2. Eigen faces algorithm is used for face detection and recognition technology. Eigen faces algorithm is less time taken and high effective than other algorithms like viola-jones algorithm etc. the attendance will directly stores in storage device like pen drive that is connected to one of the USB port of raspberry pi 2. This system is most effective, easy and less time taken for tracking attendance in organizations with period wise without any human\ intervention.

**AN EFFICIENT POWER CONTROL DETECTION SCHEME FOR MIMO TRANSMISSION IN LTE**

**Paper ID-1221**

**A paper presented by:** Rentapalli V.R., Sowjanya B., Madhav B.T.P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper author's proposed an efficient ordering scheme for interference cancellation, which is determined for multiple antenna systems using transmission power control. Based on this approach, the fixed ordering algorithm is first designed, for which the geometric mean is used for channel gain coverage. Simulation results shows that proposed ordering schemes using QR-decomposition require a reduced computational complexity results with improved error performance. In this article an overview of power control in LTE uplink MIMO schemes including receivers suitable for uplink MIMO are also presented, and their link performances are compared.

**A SCALABLE MODEL FOR BIG DATA ANALYTICS IN HEALTHCARE BASED ON TEMPORAL  
AND SPATIAL PARAMETERS**

**Paper ID-1222**

**A paper presented by:** Hemanth Chowdary S., Bhattacharya S., Satyanarayana K.V.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

As the health care industry grows at a rapid pace, it is generating large volumes of data that needs to be stored, analyzed and acted upon by various organizations. India is a very diverse country with a large population that is having increased access to centrally managed healthcare systems. This is generating huge volumes of data, whose systematic storage and analysis for organized decisionmaking will be critical to the success of the industry in the coming years. This data can be classified into the realm of "big data"™ for obvious reasons and appropriate technology will be required to handle it effectively. In this paper, we propose a model for analyzing historical healthcare data. Both temporal and spatial parameters have been used in this model to allow the healthcare professional different views into the information and thereby make informed judgments. Common constraints like quality, authenticity and security of the big data have also been addressed for complete effectiveness.

**WAVELET-BASED SUBSURFACE ANALYSIS IN A NON-STATIONARY THERMAL WAVE  
IMAGING**

**Paper ID-1223**

**A paper presented by:** Saketh P.V.S., Santosh Kumar P., Subhani S., Subbarao G.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Active infrared thermography makes use of temperature contrast over the object surface generated by distorted heat flow due to subsurface anomalies present in the material. This paper presents a wavelet transform based analysis for subsurface anomaly detection in recently introduced Quadratic frequency modulated thermal wave imaging for the subsurface analysis specimen and compares it with the contemporary Fourier transform based phase analysis using an experimentation carried over a carbon fiber reinforced plastic specimen with embedded flat bottom holes.

**CONTINUOUS SIGN LANGUAGE RECOGNITION FROM TRACKING AND SHAPE FEATURES  
USING FIS AND ANN**

**Paper ID-1224**

**A paper presented by:** Prasad M.V.D., Anil Kumar D., Kishore P.V.V., Sastry A.S.C.S., Harini A., Raviteja K., Roja Sneha N., Ashok Reddy B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Fuzzy and Neural Network based classification of continuous sign language videos with simple backgrounds trained with hybrid features is the focus of this work. Tracking and capturing hand position vectors is the artwork of horn schunck optical flow algorithm. Active contours extract shape features from sign frames in the video sequence. The two most dominant features of sign language are combined to build sign features. This feature matrix is the training vector for Fuzzy Inference Engine (FIS) and Artificial Neural Networks (ANN). The classifiers are tested with 50 signs in a video sequence. Ten different signers created 50 signs. Different instances of FIS and ANN are tested with different combination of feature vectors. The results draw comparisons between FIS and ANN classifiers for Continuous Sign Language. A word matching score (WMS) gauges the performance of the classifiers. A 90.8% average matching score is reported for FIS and 91.2% for ANN.



**SOFT SWITCHING OF INTERLEAVED BOOST CONVERTER FED PMBLDC MOTOR USING PI  
AND FUZZY CONTROLLERS**

**Paper ID-1225**

**A paper presented by:** Ramesh V., Kusuma Latha Y., Chandra Sekhar O.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper proposes an improved interleaved boost converter topology for soft switching of VSI fed PMBLDC motor. Six switch and four switch converter configurations are employed for the proposed boost converter under Zero voltage switching and Zero current switching. The proposed boost converter for PMBLDC motor under various operating condition are implemented in MATLAB/SIMULINK environment. The feasibility of six switch and four switch converter by for PMBLDC motor is explored. A comparative evaluation of speed control of six switch and four switch inverter with fed PMBLDC motor PI and FUZZY controllers has been made discussed in this paper.

**HOME AUTOMATION SYSTEM FOR DIVYANG PERSONS**

**Paper ID-1226**

**A paper presented by:** Pranav Chand A.G., Rao B.D.S.S., Gopichand C.J.S.V., Prasad D.G.R.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The most important source of motivation behind this work is to assist the people with memory disorders and divyangas to meet common living standards on their own. In this work we made an attempt to decrease the adverse effects that occur due to mind aversion and to facilitate independent living style for divyangas while performing some action or in daily life. In this work with the help of programmable logic control we provided assistance for the "memory disordered persons and divyangas", SCADA is used to demonstrate the program designed in PLC.

**DRIVERLESS PARKING SYSTEM FOR AUTOMOBILES**

**Paper ID-1227**

**A paper presented by:** Gopichand J.S.V., Srinath A., Prasad G.R.K., Anji Reddy T.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper we have proposed a new and novel automatic parking system for 4 wheelers (Auto mobiles) where we are hoping for less area consumption and human interface. This can be achieved by the use of Artificial Intelligence and Programmed Logic Controllers (PLC's), Sensors and Surveillance systems. The Vehicle is provided with the Proximity sensors around it, they will sense the distance around it and for obstacles every time. If any obstacle is in the range then it will goes in to wait state for minimum time until the obstacle clears or If not the engine goes into off state. After Pushing Automatic Parking Button (APB), it will checks for clearance and then the vehicle is parked automatically and autonomously.

**UTILIZING NL TEXT FOR GENERATING UML DIAGRAMS**

**Paper ID-1228**

**A paper presented by: Yalla P., Sharma N.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

UML diagrams form an important part of the software design specification. The source of these diagrams is requirement specification which is created from the user's need and requirements. In our work, we identify that two important areas in computer science and engineering, software engineering (SE) and natural language processing (NLP), form the core of this development. An algorithm for undertaking study of this approach is also presented. Herein, we also list the main usage of our technique to handle a more generalized environment such as non-software engineering domain.

**IMPLEMENTATION OF LOW-POWER FLIP-FLOPS USING C-ELEMENT  
Paper ID-1229**

**A paper presented by:** Supriya M.V., Noorbasha F.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

To sustain expressive achievement of digital schemes, although compressing the power expenditure, fulfilment of dual edge flip-flops receives freshly develops into the target of innumerable exploration. Powerful low-power flip-flops acquire district absolute fundamental elements gross sudden length of histrionic organizes succeeding circumferences/circuits. Individually conclude and impressivetesting as long as their exploit, Q-Delay, Path of the Rise time, Path of the fall time and Average Power Consumption. Whereas Power reveal smart effective count regarding transistors latest thing electrifying circuits, uncertainly we survive balancing including scheming comic number like transistors suspensefulthe each number of flip-flops. Analysis/inquiry about static/stable circuits go on spent through Dual Data Rate (DDR) using PTM CMOS-45nm Technology alongside 5MHZ frequencies including their victory operation. Sensational construction regarding Dual Data Rate (DDR) Flip-Flop utilizes 30% fewer capacity/power, including 14% lower C-Q delay.

**MODERN ESTIMATION TECHNIQUE FOR UNDERSEA ACTIVE TARGET TRACKING**

**Paper ID-1230**

**A paper presented by:** Lakshmi Prasanna K., Koteswara Rao S., Jawahar A., Karishma S.B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Pseudo Linear Estimator (PLE) developed for active target tracking in underwater environments. The PLE in sequential mode is considered here for this application. The results of PLE are compared with that of EKF. The results of Monte-Carlo simulation are presented for two selected scenarios. In PLE, there is no need to initialize target state vector and its covariance matrix with prior (approximate) knowledge and hence its performance is found to be better than that of EKF.

**INVESTIGATIONS ON EFFECT OF FUEL INJECTION PRESSURE ON PERFORMANCE AND  
EMISSIONS OF LINSEED BLENDS IN A DIESEL ENGINE**

**Paper ID-1231**

**A paper presented by:** Theja A.H.K., Hanumantha Rao Y.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Ever increasing demand on fossil fuels and environmental degradation with their use concern the global utilization of internal combustion engines in industrial, automotive and power sectors. An alternate to high pollutant diesel derived from renewable energy sources should be environment friendly, economically cheaper, technically feasible without compromising the engine performance and should provide energy security. Non-edible oils such as linseed oil, karanja, jatropha, and mahua etc., are mostly preferable. In this study, linseed oil derived from flax seed plant is chosen and blended it with diesel in proportions of 10%, 20% and 30%. Performance and emission characteristics of linseed oil blends (L10, L20 and L30) and the diesel are investigated at constant speed in a diesel engine with nozzle opening pressure of 200 bar. The experiment is repeated for different injection pressures (220 and 240 bar) and the results are compared with baseline diesel. Brake specific energy consumption (BSEC) for biodiesel blends is comparable to diesel fuel at all loads and fuel injection pressures (FIPs). Brake thermal efficiency (BTE) is optimum for biodiesel blends at injection pressure of 200 bar. Diesel has shown high mechanical efficiency than biodiesel blends at FIPs 220 and 240 bar. Carbon emissions are less with diesel compared to biodiesel blends.

**EQUIVALENCE ANALYSIS ON DESIGN AND MODELLING OF CAPACITIVE PRESSURE  
SENSORS WITH DIFFERENT STRUCTURE OF DIAPHRAGM**

**Paper ID-1232**

**A paper presented by:** Nagendra Reddy N., Spandana K., Siddaiah N., Manju Sree B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Sensors are becoming one of the inextricable parts of the human life. MEMS technology made this sensors error free and with overcoming the boundary of classical sensors. Pressure sensors are plays key role in many disciplines. Here in this paper we were designed and simulated capacitive pressure sensor with non-identical diaphragm structure with different measurements. We are using silicon as the material for the diaphragm because of its unique properties. In the design circular design has radius 36 um and the square with and keeping the areas of all designs are unique. The entire simulation is done using COMSOL multi physics.



**DESIGN AND ANALYSIS OF VERTICAL AXIS SAVONIUS WIND TURBINE**

**Paper ID-1233**

**A paper presented by:** Jagadish Venkata Sai S., Venkateswara Rao T.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper presents the design and analysis of vertical axis Savonius wind turbine to generate electrical energy from wind energy. The Savonius rotor was designed with the rotor diameter of 2 m and the rotor height of 4 m. The 3D model of Savonius rotor blade was made by utilizing SolidWorks software. Computational Fluid Dynamics (CFD) analysis and structural Finite Element Analysis are presented in this paper. CFD analysis was done to obtain the pressure difference between concave and convex surface of the rotor blade and structural FEA was done to obtain the structural response of blade.

**DESIGN AND VERIFICATION OF AMBA AHB-LITE PROTOCOL USING VERILOG HDL**

**Paper ID-1234**

**A paper presented by:** Kante S., Kakarla H.K., Yadlapati A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The SOC plan confronts a crevice between generation limit and time to market weights. The outline space develops with changes underway limits as far as measure of time to plan a framework utilizing these abilities. On one hand, shorter product life cycles are forcing an aggressive reduction of the time-to-market, fast simulation capabilities are required for coping with the immense design space that is to be explored; these are specially needed during early stages of the design. This need has driven the improvement of exchange level models, which are theoretical models that have been designed to run much quicker than synthesizable models. The pressure for faster executing models extends especially to the frequently reused communication libraries. AMBA AHB-Lite addresses the requirements of high-performance synthesizable designs. It is a transport interface that provides support to a solitary transport ace and gives elite data transfer capacity. This paper describes the system level modelling of the Advanced High performance Bus Lite (AHB-Lite) subset of AHB which is a part of the Advanced Microprocessor Bus Architecture (AMBA). It also includes the design and verification of AHB-Lite protocol for sequential and non-sequential (increment and wrap of different burst sizes) transfers.

**ENHANCED ENERGY HARVESTING AND ANALYSIS OF A HIGH CONCENTRATION  
PHOTOVOLTAIC / THERMAL SYSTEM WITH SUPPORT OF COOLING FLUID AND  
INCREASED MASS FLOW RATES**

**Paper ID-1235**

**A paper presented by:** Murty A.S.R., Phani Rajanish Y.P.D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper a high concentration photovoltaic (HCPV) system is considered. A parabolic dish collector focuses the incident energy on to a triple junction solar system. High concentration ratios ranging from 10 x to 1000x increases the cell temperature, resulting in a decrease in electrical efficiency. Thermal analysis of a water based cooling system is modeled to enhance the electrical efficiency and also to study the thermal efficiency of such HCPV system. It is to be noted that with an increase in mass flow rate of water, the electrical efficiency increases and the thermal efficiency decreases. Finally, a comparison of efficiencies with and without cooling are presented.

**LOW POWER RAM-BASED HIERARCHICAL CAM ON FPGA**

**Paper ID-1236**

**A paper presented by:** Komal R.C., VenkateswaraRao M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In the Wireless routers and network devices like servers CAM Content-Addressable Memories will be mostly used as they have a good transmission rate to transfer the data packets. So the main role played by the CAM is it will easily transfer the internet packets like drop and forward mechanism. During such transmission CAM having a limitations like more power usage and less integration density, along with this CAM will not be accessible on the FPGA which will elaborate the usage of network framework. In order to reduce the high power consumption and to achieve more integration density, we proposed RAM based CAM in this paper. Now-a-days on modern FPGA we can see larger blocks of RAM.

**EFFICIENT ECG SIGNAL CONDITIONING TECHNIQUES USING VARIABLE STEP SIZE LEAST  
MEAN FOURTH ALGORITHMS**

**Paper ID-1237**

**A paper presented by:** VenkataSrikanth B., Ur Rahman M.Z.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Obtaining an artifact free signal is an important task in making a successful diagnosis using Electro Cardiograph (ECG) signal. Several techniques were proposed in the literature with varying degree of accuracy. In this paper some efficient signal conditioning techniques to remove the artifact from ECG signals are presented. The proposed techniques are derived from basic higher order technique known as of Least Mean Fourth (LMF) algorithm. All the techniques are evaluated using MIT-BIH arrhythmia database. The SNR performance of the techniques is calculated and is compared with Normalized Least Mean square (NLMS) algorithm. From the SNR measurements obtained variable XENLMF was found to be exhibiting the superior performance over the NLMS and the other techniques and on an average the SNR values of variable XE-NLMF in case of PLI, BW, MA and EM artifacts are 10.7800dB, 8.5950dB, 9.0703dB, 8.3210dB which are better than their counterparts. The convergence characteristics of all these techniques measured have further shown the suitability of the Variable XENLMF technique over the other in using at real time situations.

**A NOVEL INTEGRATION OF THREE-LEVEL AC-DC CONVERTER WITH CLOSED LOOP  
CONTROLLER**

**Paper ID-1238**

**A paper presented by:** Jayanth Kumar V., Chandra Sekhar O.C.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this project, closed loop integrated threelevel ac-dc converter is presented in order to improve the stability of the system. By implementation of PI controller with PWM technique in closed loop, the switching sequence is under controlled condition and the output voltage of the proposed converter effectively increases. Mainly the present converter is combination of the operation of boost power factor correction and threelevel dc-dc converter. Two large capacitors are taken in order to improve the efficiency and accuracy of the ac-dc converter. This converter operated with two different controllers. Power factor correction and regulation of dc bus voltage was done by input controller. The output voltage is maintained by output controller. In this we are using single stage converter topology in which the dc bus voltage in single stage converter is controlled by input controller. Finally in this project we are maintaining the stability of the previously implemented three-level integrated ac-dc converter. The flexibility of the improved converter is obtained from prototype which are shown in simulation results by using MATLAB/Simulink.

**PV-FED SWITCHED RELUCTANCE MOTOR FOR AGRICULTURAL NEEDS**

**Paper ID-1239**

**A paper presented by:** Kumar M.K., Chandra Sekhar O.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In the recent technology, PV systems are the most commonly used sources in many applications. The electrical energy which is generated by the PV cell can feed loads. In agricultural field applications electrical motors are required to feed water for the field. Many motors compete for this kind of application in agricultural fields but switched reluctance motor (SRM) has many advantages over other motors. In this paper, application of SRM for agricultural fields with closed loop operation is discussed. The maximum available power at any moment can be extracted by using maximum power point tracking (MPPT) algorithm. MPPT with perturb and observe (P&O) method is used for extracting the maximum power. The Models discussed here are simulated using MATLAB/SIMULINK and the results are critically analyzed.

**ASSESSMENT OF DIFFERENT MPPT TECHNIQUES FOR PV SYSTEM**

**Paper ID-1240**

**A paper presented by: Mamatha G.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Photovoltaic (PV) energy, which has proven to be environmentally friendly and sustainable compared to traditional energy sources, has gained widespread attention in recent years. PV technology is one of the fastest growing energy technologies in the world owing to its abundant availability. But unfortunately, the cost of PV energy is higher than that of other electrical energy from other conventional sources. Therefore, a great deal of research opportunities lie in applying power electronics and control technologies for harvesting PV power at higher efficiencies and efficient utilization. Simulation/coding and control studies of a PV system require an accurate PV panel model. Further, for efficient utilization of the available PV energy, a PV system should operate at its maximum power point (MPP). A maximum power point tracker (MPPT) is needed in the PV system to enable it to operate at the MPP. Maximum power point trackers (MPPTs) play an important role in photovoltaic (PV) power systems because they maximize the power output from a PV system for a given set of conditions, and therefore maximize the module efficiency. Thus, an MPPT can minimize the overall system cost. MPPTs find and maintain operation at the maximum power point, using an MPPT algorithm. This paper presents a comparative study of three widely-adopted MPPT algorithms, and assessment of each method using MATLAB coding as well as simulink.



**COMPARISON OF SEN TRANSFORMER WITH DVR FOR LVRT SOLUTION OF DFIG WIND  
TURBINE**

**Paper ID-1241**

**A paper presented by:** Burthi L.R., Linga Reddy P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Present scenario the electrical grid is being interconnected with different types of renewable energy sources. Among them the usage of doubly fed induction generators (DFIGs) in large wind farms has become quite common. The main difficulty of the DFIG is that it is very perceptible to grid side disturbances, particularly voltage dip/sags. This paper evaluates and compares the ability of a DFIG in a wind turbine to ride through a grid fault by injecting an adjustable series compensating voltage produced by dynamic voltage restorer (DVR) and proposed low voltage ride through (LVRT) solution 'Sen' Transformer (ST). The technology of transformers and tap changers is proven to be reliable and cost-effective when compared with the DVR emerging technology of multilevel convertor based DVR

**DESIGN AND IMPLEMENTATION OF THE LIGHTER VERSION OF SKEIN CRYPTOGRAPHIC  
HASH FUNCTION USING VERILOG HDL**

**Paper ID-1242**

**A paper presented by:** Mooragondi A.L., Senapati R.K., Yadlapti A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Secure Hashing set of rules-1 (SHA-1), created through National Institutes of Standards and Technology in 1993 is a hashing algorithm that was used to supply message digest. In 2005, cryptanalysts determined attacks on SHA-1 suggesting that the algorithm may not be comfuy sufficient for ongoing use. The drawbacks of SHA-1 result in invention of new algorithm, SHA-2 which possessed excessive stage of protection. One of the drawbacks of this algorithm becomes no longer likeminded with running systems. In 2012, NIST performed a hash feature opposition to select a standard for the latest SHA-3 cryptosystem of which skein was into one of the five finalists. This research is aimed towards implementing "Lighter version of Skein" which is based on the skein hash function in Verilog and its FPGA simulation using the Xilinx Virtex 7. The design for both encryption and decryption of lighter version of skein has been discussed in this study. The additives, it uses are threefish block cipher and the unique block iteration. The overall performance attributes of lighter version of skein are discussed below. The principle goal is to examine and compare the latency, throughput and delay of lighter version of skein with skein-256 and various other traditional block ciphers and cryptosystems.

**AN INTELLIGENT OPTIMIZATION APPROACH TO QUARTER CAR SUSPENSION SYSTEM  
THROUGH RSM MODELED EQUATION**

**Paper ID-1243**

**A paper presented by:** Sreekar Reddy M.B.S., Rao S.S., Vigneshwar P., Akhil K., Rajasekhar D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper present on minimum value of rider comfortness vibration values to obtain maximum rider comfortness during riding. The simulation model was being achieved with the help of MATLAB/Simulink for further process to Genetic Algorithm through Response surface methodology modeled equation. As the response surface methodology is a long established technique in optimization for experimental process. Recently a new intelligent approach to the quarter car suspension system has been tried with response surface methodology and genetic algorithm which is new in the computational field. For the Response surface methodology, an experimental design was chosen in order to order to obtain the proper modelling equation. Later this modeled equation was served as evaluation function or objective function for further process into genetic algorithm. In Genetic algorithm case, the optimality search was carried without the knowledge of modelling equations between inputs and outputs. This situation is to choose the best values of three control variables. The techniques are performed and results indicated that technique is capable of locating good conditions to evaluate optimal setting, to reduce comfortness vibrations for maximum comfortness.

**DETERMINATION OF PHASE TRANSITIONS IN HYDROGEN BONDED COMPLEXES (NOBA:  
PFOA) USING TEXTURAL IMAGE PROCESSING TECHNIQUES**

**Paper ID-1244**

**A paper presented by:** Rambabu M., Prasad K.R.S., Madhav B.T.P., Venu Gopalarao M., Pardhasaradhi P.,  
Pisipati V.G.K.M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Synthesis and characterization of a novel series of inter molecular hydrogen bonded liquid crystals are done. Eleven hydrogen bonded complexes are characterized by the polarizing microscope (POM) attached with a hot stage, Differential scanning calorimeter (DSC) and Fourier transformed infrared spectroscopy (IR). The effect of chain length on the phase transitions is discussed by POM and DSC respectively. The complexes having chain number  $n=7-12$  exhibits nematic, smectic-B and smectic-G. In this case both smectic-B and smectic-G phases are induced by the quenching of smectic-C phase. Along with DSC results, we have done textural analysis using image processing techniques and found that transition temperatures in both the cases are almost identical. We reported corresponding simulated statistical analysis data in comparison with DSC measurements available.

**MINING MAXIMAL EFFICIENT CLOSED ITEMSETS WITHOUT ANY REDUNDANCY**

**Paper ID-1245**

**A paper presented by:** Greeshma L., Pradeepini G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Mining more relevant itemsets from various information repositories, which is an essential task in knowledge discovery from data that identifies itemsets with more interestingness measures (support and confidence). Due to the availability of data over Internet, it may retrieve huge number of itemsets to user, which may degrade the performance and increase time complexity. This paper proposed a framework called Analyzing All Maximal Efficient Itemsets to provide a condensed and lossless representation of data in form of rule association rules. We proposed two algorithms Apriori-MC (Apriori-Maximal Closed itemsets) and AAEMIs (Analyzing All Efficient Maximal Itemsets) by deleting non-closed itemsets. The proposed method AAEMIs regains complete relevant itemsets from a group of efficient Maximal Closed Itemsets (MCIs) without specifying user specified constraint and overcoming redundancy.

**A NOVEL GRAPHICAL PASSWORD AUTHENTICATION MECHANISM FOR CLOUD SERVICES**

**Paper ID-1246**

**A paper presented by:** Kameswara Rao M., Usha Switha T., Naveen S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Password provides high security and confidentiality for the data and also prevents unauthorized access. So, the most popular authentication method which is the alphanumeric passwords that provides security to users which are having strings of letters and digits. Due to various drawbacks in text based passwords, graphical password authentication is developed as an alternative. In graphical password authentication, password is provided based on the set of images. For users it is easy to remember images than text and also graphical passwords provide more security when compared to text based. There are two techniques in graphical passwords. They are Recognition based technique and Recall based technique. To provide more security to user a new idea has been proposed by combining Recognition based and Recall based techniques in this paper.

**ENHANCING CLOUD COMPUTING SERVER TO USE CLOUD SAFELY AND TO PRODUCE  
INFRASTRUCTURE OF HIGH PERFORMANCE COMPUTING**

**Paper ID-1247**

**A paper presented by:** Sultanpure K., Reddy L.S.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Significance of cloud computing is getting popular in industrial and scientific communities for its numerous advantages and it is not free from its drawbacks. However, it has been observed that major issues such as security, compliance, legal, and privacy matters relative to risk areas like external storage of data, shortage of control, public Internet dependency, integration and multitenancy with internal security are not addressed to their fullest extent. Conventional security mechanisms like authorization, authentication, and identity are found to be inadequate for present cloud users. Moreover, controls of security in cloud computing are unique than controls of security in any information technology environment with respect to deployment, technologies, and operations. Therefore, in order to address the aforesaid issues this research intends to focus on enhancing the cloud computing server for security, performance, and load balancing to use cloud safely for high performance computing and to produce infrastructure of high performance computing.

**A RECENT STUDY OF EMERGING TOOLS AND TECHNOLOGIES BOOSTING BIG DATA  
ANALYTICS**

**Paper ID-1248**

**A paper presented by: Pole G., Gera P.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Traditional technologies and data processing applications are inadequate for big data processing. Big Data concern very large-volume, complex formats, growing data sets with multiple, heterogeneous sources, and formats. With the reckless expansion in networking, communication, storage, and data collection capability, the big data science is rapidly growing in every engineering and science domain. Challenges in front of data scientists include different tasks, such as data capture, classification, storage, sharing, transfer, analysis, search, visualization, and decision making. This paper is aimed to discuss the need of big data analytics, journey of raw data to meaningful decision, and the different tools and technologies emerged to process the big data at different levels, to derive meaningful decisions out of it.



**A SHOULDER-SURFING RESISTANT GRAPHICAL PASSWORD AUTHENTICATION SCHEME**

**Paper ID-1249**

**A paper presented by:** Kameswara Rao M., Vidya Pravallika C., Priyanka G., Kumar M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Many Internet-based applications authenticate the users before they are allowed to access the services provided by them. The traditional text-based password system is vulnerable to brute force attack, peeping attack, and reverse engineering attacks. The pitfalls of text-based passwords are addressed by employing graphical passwords. To create a password the graphical password systems make use of custom images, icons, or faces. Using images will decrease the tendency to choose insecure passwords. In this paper, we present a shoulder-surfing resistant pair based graphical password scheme to authenticate a user. Further enhancement of the proposed scheme is briefly discussed. Security analysis of the method is also evaluated.

**EFFECTS OF SURFACE ROUGHNESS IN SQUEEZE FILM LUBRICATION OF TWO CIRCULAR  
PLATES**

**Paper ID-1250**

**A paper presented by: Kumar V.J., Rao R.R.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A generalized form of Reynolds equation for two symmetrical surfaces is taken by considering surface roughness at the bearing surfaces. This equation is applied to study the effects of surface roughness for the lubrication of squeeze films of two circular plates. Expressions for the load capacity and squeezing time obtained are studied theoretically for various parameters. The load capacity and squeeze time increases with the increase in the value of 'k' i.e; due to high viscous lubricant layer near the surfaces the load capacity and squeezing time increase which enhances the lubrication process. In the case of transverse roughness the load capacity and squeezing time increases as the mean height of surface asperities increases and the load capacity and the squeezing time decreases as the mean height of surface asperities increases in the case of longitudinal roughness. Hence the effect of roughness is more pronounced in the case of transverse roughness.

**OPTICAL FLOW HAND TRACKING AND ACTIVE CONTOUR HAND SHAPE FEATURES FOR  
CONTINUOUS SIGN LANGUAGE RECOGNITION WITH ARTIFICIAL NEURAL NETWORK**

**Paper ID-1251**

**A paper presented by:** Kishore P.V.V., Prasad M.V.D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

To extract hand tracks and hand shape features from continuous sign language videos for gesture classification using backpropagation neural network. Horn Schunck optical flow (HSOF) extracts tracking features and Active Contours (AC) extract shape features. A feature matrix characterizes the signs in continuous sign videos. A neural network object with backpropagation training algorithm classifies the signs into various words sequences in digital format. Digital word sequences are translated into text with matching and the suiting text is voice translated using windows application programmable interface (Win-API). Ten signers, each doing sentences having 30 words long tests the performance of the algorithm by computing word matching score (WMS). The WMS is varying between 88 and 91 percent when executed on different cross platforms on various processors such as Windows8 with Inteli3, Windows8.1 with inteli3 and windows10 with inteli3 running MATLAB13(a).

**SELECTION OF ANCHOR NODES IN TIME OF ARRIVAL FOR LOCALIZATION IN WIRELESS  
SENSOR NETWORKS**

**Paper ID-1252**

**A paper presented by:** Rao K.R., Kumar T.R., Venkatnaryana C.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Localization in wireless sensor network plays crucial role in emerging wireless communication applications. In this paper, the maximum lambda and minimum error (MaxL-MinE) localization technique is implemented with different configuration of nodes in MATLAB. It is found that the accuracy of position error is reduced as the number of anchor nodes increases. The outcome of this study would be useful for developing real-time wireless sensor network (WSN) localization models.

**A PROPOSAL FOR PACKET DROP ATTACKS IN MANETS**

**Paper ID-1253**

**A paper presented by:** Swarna M., Umar S., Suresh Babu E.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The packet drop attack is more familiar to protection risks in MANETS. These attackers implement loop-hole which bring with envious characteristics because the path finding procedure which is vital and unavoidable. Researchers and investigators have performed distinct recognition methods recommend various types of recognition schemes. AODV protocol which correctly appropriate redirecting method for the MANETS and it is more susceptible to dark gap strike by the envious nodes. A harmful node that wrongly delivers the RREP (route reply) that it has a newest path with lowest hop count to location and then it falls all the getting packets. In this paper we present four types of different protocols for detecting black whole attacks and discuss state of the art routing methods. We also perform different properties in collaborative packet drop attacks and analyze categories of propose protocols with specified features stored in wireless ad hoc networks. We analyze comparison of proposed protocol with existing protocols and their methods with respect to time and other features in wireless ad hoc networks.

**DESIGN OF STATIC FLIP-FLOPS FOR LOW-POWER DIGITAL SEQUENTIAL CIRCUITS**

**Paper ID-1254**

**A paper presented by:** Jaya Kumar E., Noorbasha F.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper, we correlated various Master and slave flip-flops i.e., single edge triggered flipflops. The low-power flip-flops have place utmost necessary elements all the range of the constructing static or successive circuits. We accomplish the comparison for their performance, Delay, Rise time, Fall Time and Power dissipation. Because Power confide in the number of transistors in the circuits, so we are comparing and calculating the number of transistors of the each flip-flops. Analysis of a static/sequential circuits is done by Linear Feed Back Shift Register (LFSR) using 45nm Technology with 5MHZ frequencies and their performance analysis.

**OPTIMUM RESOLUTION OF PHASE FREQUENCY DETECTOR BY CMOS TECHNOLOGY FOR  
PLL**

**Paper ID-1255**

**A paper presented by:** Vinay Kumar B.Y., Shameem S., Ganesh G.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

One of the nonlinear components in PLL is Phase Frequency Detector (PFD), the purpose is to compare two input frequencies in terms of their phase and frequency. In this process jitter will be introduced to the PLL system by PFD. proposed PFD is the preferred approach for detecting weak signals as from a deep space profile. The increase of MOS devices on a single chip will consume more power. Various applications of the PLL such as wireless communication systems, digital circuits, and receivers, targets optimum PFD Design. Optimized PFD reduces jitter effect on PLL and enhances the performance of PLL by increasing the locking range, reducing the phase error variance, reducing the acquisition time and reducing the power consumption. The power consumption in the design of PFD is dependent on CMOS logic of the gates In this paper we propose CMOS PFD, where the performance of the result will be analyzed by using Tanner EDA Tool by considering 45nm technology.

**ORTHONORMAL PROJECTION APPROACH FOR DEPTH-RESOLVABLE SUBSURFACE  
ANALYSIS IN NON-STATIONARY THERMAL WAVE IMAGING**

**Paper ID-1256**

**A paper presented by:** Subhani S.K., Suresh B., Ghali V.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Subsurface analysis using infrared imaging makes use of the temperature contrast originating from the perturbed propagation of diffusive thermal waves. Recently-proposed depth-resolvable modalities explore finer subsurface details and provide better depth scanning of the test object. This paper presents the application of a novel random orthonormal basis for detection and for resolving the subsurface anomalies located at various depths inside a carbon fibre-reinforced plastic specimen using recently-introduced quadratic frequency-modulated thermal wave imaging.



**MODELING OF SUPERVISED ADALINE NEURAL NETWORK LEARNING TECHNIQUE**

**Paper ID-1257**

**A paper presented by:** Pellakuri V., Rao D.R., Murthy J.V.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Artificial neural systems are exceptionally refined demonstrating procedures able to do to great degree complex functions. These days, they are as a rule effectively connected over an extensive variety of issue spaces, in zones, for example, money, pharmaceutical, designing, geography and material science. Without a doubt, anyplace that there are issues of forecast or classification, neural systems are being presented. Numerous training algorithms have been proposed so far to enhance the execution of neural systems for decision support systems. This paper demonstrates the displaying of ADALINE neural system learning method and their functions using delta learning rule with data learning rate to set up the Adaptive linear neuron or adaptive linear element frameworks. To dissect execution of the system different test information of data are given as data to the system. Parallelism is actualized at every input neuron to target layers to accelerate the learning procedure. The trial results are compared with multi layer feed forward back propagation neural network and demonstrated that Adaline neural system is one of the simplest and fastest method that give effective results to decision undertakings.

**PHASE SHIFTING TRANSFORMER: MECHANICAL AND STATIC DEVICES**

**Paper ID-1258**

**A paper presented by: Ramamoorthy M., Toma L.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The electrical power systems experience increased fluctuations in the power flows due to the scheduled power exchanges under the liberalized electricity market and the increased penetration of wind and solar energy. Steady-state power flow regulation by means of conventional phase-shifters has been a common practice by the utility industry for a long time. The phase and voltage regulating transformers, also known as phase-shifting transformer (PST), phase angle regulating transformer, phase angle regulator, phase shifter, or quadrature booster (QB), are a specialized form of transformer used to control the active power flow in three-phase electricity transmission networks. The term phase-shifter is more generally used to indicate a device that can inject a voltage with a controllable phase angle and/or magnitude under no-load (off-load) and load (on-load) conditions.

**CNB-MRF: ADAPTING CORRELATIVE NAIVE BAYES CLASSIFIER AND MAPREDUCE  
FRAMEWORK FOR BIG DATA CLASSIFICATION**

**Paper ID-1259**

**A paper presented by:** Banchhor C., Srinivasu N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Due to the continuous arrival of plenty of raw data, the big data classification is getting much attention in various fields, such as industry, medicine, and financial business. Due to the urgent need of big data classification in those fields, several standard classifiers are adapted to perform the big data classification, but they are not able to deal with these huge data problems. More commonly, Navie Bayes classifier is mostly preferred for big data classification because of its simple computation procedure. However, the main drawback behind this classifier is the independence hypothesis, in which the input data are conditionally independent of each other. To overcome this drawback, we propose a new classification algorithm using Correlative Naïve Bayes classifier and MapReduce framework (CNB-MRF). Here, the newly proposed correlation function with MapReduce framework is used to make the classification based on the dependent hypothesis to improve the classification performance. Here, the data classification can be easily performed for every new sample through the probability index table of the training data sample and the posterior probability of the testing data samples using MapReduce framework. Then, the classification by the proposed CNB-MRF classifier is performed using localization and skin dataset. It is concluded that, the proposed CNB-MRF classifier achieves a high classification accuracy of 74.77% and 61.35% for localization and skin dataset respectively, as compared with Naïve bayes classifier and MapReduce framework (NB-MRF).

**AN INTELLIGENT FEATURE BASED PROCESS PLANNING FOR ROTATIONAL PARTS**

**Paper ID-1260**

**A paper presented by:** Reddy S., Manidhar D.V., Raj H., Ali A., Manupati V.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper deals with the development of a software package which assists an automatic feature recognition technique to extract the geometrical features from the subsequent Standard for the Exchange of Product model Data (STEP) file which is generated using the 3D CAD model. The following aftermath is a crucial facet in downstream applications like- generation of process plans, part programs etc. A generalized Java code has been formulated to recognize the turning features of the previously extracted information regarding the rotating parts from the STEP file and henceforth this information is employed to effectuate a Computer Numerical Control (CNC) part programs using several logics. Furthermore, with the aid of a statistical technique called Response Surface Methodology (RSM), we optimize the acquired response and using the best combination of surface roughness and machining time, we generate the process plan. The authors present an example to demonstrate the application of the proposed methodology using CNC simulation software and its subsequent validation.

**ASSESSMENT OF GROUNDWATER POLLUTION ALONG THIPPAGUNTA DRAIN IN  
PRASADAMPADU, VIJAYAWADA RURAL, KRISHNA DISTRICT, ANDHRA PRADESH**

**Paper ID-1261**

**A paper presented by:** Sujatha M., Rao N.R., Satyanarayana T., Asadi S.S., Babu K.S.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Assessment of groundwater pollution along Thippagunta drain, the physical and chemical characteristics such as colour, turbidity, odour, pH, Electrical Conductivity, Total dissolved solids, Total Hardness, Calcium, Magnesium, Nitrate, Sulphate Chloride, Fluoride and Iron were studied. The main objective of the study is to know the quality of water for drinking and its impact on the public health of Prasadampadu. All the parameters of groundwater samples in the study area are within the permissible limits except at industrial Estate and Johnson Private Limited Industry, near Pantakaluva.

**STUDY ON STRENGTH AND BEHAVIOR OF CONVENTIONALLY REINFORCED SHORT  
CONCRETE COLUMNS WITH CEMENT FROM INDUSTRIAL WASTES UNDER UNIAXIAL  
BENDING**

**Paper ID-1262**

**A paper presented by:** Rao V.R., Murty D.S.R., Reddy M.A.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The most ubiquitous and versatile building material, Ordinary Portland Cement (OPC) Suffers from several maladies that inflict may harmful effects on the society. Ever increasing demands for OPC for infrastructural development world over, additional binder production also becomes possible by producing binder totally from industrial wastes; in this category comes fly ash - lime - gypsum (FaL-G) cement. FaL-G cement is a hydraulic cement constituted totally by industrial wastes, fly ash, lime, and gypsum. The cost of FaL-G cement is only 20% of the cost of OPC. FaL-G cement concrete works out to about 67.09% of the cost of OPC concrete. The main objective of this investigation was to obtain experimental data, on the strength and behavior of reinforced concrete columns made of FaL-G cement, subjected to combined axial load and uniaxial bending. A total of 10 short columns (5 each with FaL-G and OPC) were cast, the columns were loaded with different eccentricities of 0.1,0.3,0.5 and 0.7 in the universal testing machine of 1000 kN maximum capacity with different loading ranges. The results, deflections and crack width were determined by experimentally and numerically for OPC and FaL-G, comparisons were made with theoretical results to obtain correlation factor.

**MINING POSITIVE AND NEGATIVE REGULAR ITEM-SETS USING VERTICAL DATABASES**

**Paper ID-1263**

**A paper presented by:** Pavan Kumar N.V.S., Rajasekhar Rao K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Mining negative itemset and association rules have always been interesting but challenging because of their high search space and complexity. Almost all the methods proposed for negative association rule mining finds negative itemset along with positive itemset. It is difficult to find meaningful association between items by defining various kinds of correlation constants along with the formal support confidence framework as not all the itemset are interesting. Regular itemset mining is another emerging area of knowledge discovery in databases which by its kind varies from traditional frequent itemset and association rule mining. So far there are several algorithms proposed successfully to find positive regular itemset but no algorithm exists to mine negative regular itemset. Hence in this paper we are presenting an efficient NPRISM (Negative and Positive Regular Item Set Mining) algorithm to mine both positive and negative regular itemset. We opted for a vertical format in this algorithm in order to improve the efficiency and for convenience. The experimental results show that our algorithm successfully finds all the positive and negative itemset by scanning the database only once.

**CONTROL OF PMSG BASED WIND ENERGY CONVERSION SYSTEM WITH THREE-LEVEL  
BOOST AND NPC CONVERTERS**

**Paper ID-1264**

**A paper presented by: Pidiiti T., Das G.T.R.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper, a new medium voltage (MV) PMSG based variable speed wind Energy Conversion System (VSWECS) controlled by three level boost(TLB) and Five level Neutral point clamped(NPC) converter is presented to improve the performance. The dc-link control strategy for tracking the maximum power and maintaining constant Dc-link voltage will be performed by TLB. The simulation results for 3MW/3000V/50Hz non salient pole PMSG wind energy system are presented to validate the topology and control scheme.



**DESIGN OF WEB BASED DECISION SUPPORT SYSTEM - MODEL STUDY OF VIJAYAWADA,  
A.P.**

**Paper ID-1265**

**A paper presented by:** Chandra D.S., Asadi S.S., Raju M.V.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The present study is about Environmental parameters of Vijayawada of Krishna district, Andhra Pradesh. The study is aimed at creation of website using PHP (Hypertext Preprocessor), Jscript (Java script) and HTML (Hypertext Markup language) languages. An inbuilt decision support system (DSS) was created for accessing various environmental parameters like water quality data, soil quality data and air quality data of Vijayawada area which are collected from various Government Departments such as Ground Water Department, Soil Department and Andhra Pradesh Pollution Control Board (APPCB). The said Data was given as an input and stored in the database, a query run on the database to have a required report on environmental parameters in the Decision support system webpage. The study resulted in developing environmental information decision support system which will be playing a vital role in taking a decision for Vijayawada local area with respect to environment. This system is user friendly and a decision can be made using the updated data or information. This website of Decision support system (DSS) can be used as a replica for other areas.

**A CRITICAL COMPARISON OF QUANTITY ESTIMATION FOR GATED COMMUNITY  
CONSTRUCTION PROJECT USING TRADITIONAL METHOD VS PLAN SWIFT SOFTWARE: A  
CASE STUDY**

**Paper ID-1266**

**A paper presented by:** Aditya Varma K.V., Manideep T., Asadi S.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A Construction Estimator primarily focuses on estimating the cost of building before construction and gives general idea of construction cost before the construction. This process involves taking quantity take offs and calculating overall cost accordingly. The job of quantity take offs requires pain staking efforts and huge time to maintain accuracy. A mid-size contractor generally submits 20-25 bids every month, and every bid needs quantity take off to be done to arrive at the estimated cost of project. This poses a challenge to the estimators to complete the estimation work in short time. Even today, most of the estimators use Microsoft Excel Sheets to compute the take offs. The writer of this paper suggests the estimators to use a quantity take off software named Plan swift to do quantity take offs effectively. The Objective of this paper is to analyze the effectiveness of various cost estimation methods by comparing Traditional and Plan swift method to do quantity take offs through a case study in Hyderabad.

**GENERATING AUTOMATIC CERTIFYING REFACTORED ENGINE FOR SOFTWARE LEGACY  
SYSTEM**

**Paper ID-1267**

**A paper presented by: Srinivas M., Rama Krishna G., Rajasekhara Rao K.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Refactoring or Platform migration is a process of improving the underlying design and architecture of legacy systems that subsequently can improve their performance and maintainability. Many of the legacy technologies are no longer supported, hence the need for migration. However, the refactoring tools are not correct in every possible cases and programmers cannot trust them. One has to make sure that the functionality of the legacy system remains intact after going through the process of migration. Hence there is a need to build certified refactoring tools which were useful for industrial developments. In this paper, we will address the complete automated certification mechanism which certifies all the functional components of a service or application and various process involved during the certification phase. We are particularly interested in complex program transformation based on a sequence of refactoring operations provided by eclipse tools.

**GA FACTOR: A GENERIC AUTOMATED REFACTORING TOOL FOR THE LEGACY  
SOFTWARE SYSTEMS**

**Paper ID-1268**

**A paper presented by:** Srinivas M., Krishna G.R., Rao K.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Over the last two decades, many business organizations had noticed that a generous amount of nontrivial legacy software frame works fail due to unstructured architectural design. Moreover, refactoring is professional procedure for managing the software systems. Indeed, programmers practice regularly with refactoring tools in two different occasions-normal program development phase whenever and wherever design problems arise. Secondly these tools are needed at the time of code duplication, specifically when adding a new feature, the programmer need to remove the duplication using the re-factor tool. Based on level of automation, refactoring can be classified into three categories-fully manual refactoring, semi-automatic refactoring and automatic refactoring. However, fully manual refactoring and semi-automatic refactoring tools are underused, because sometimes fails to recognize the legacy code and chasing the error messages that leads to more error-prone. This study proposed a novel refactoring tool called GA factor. The GA factor system detects a developer's legacy code, reminds to the programmer that the automatic refactoring is available and if the programmer accepts then GA factor complete the refactoring automatically. GA factor automatically performs static analysis for analyzing the flow of knowledge of the code that saves the software engineer from doing erring.

**STRENGTH IMPROVEMENT OF WELDED JOINT BY USING RANDOM VIBRATIONS**

**Paper ID-1269**

**A paper presented by:** Balasubramanyam P.N.V., Uzwalkiran R., Kumar M.N.V.R.L., Ramgopal M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Welded joints are used for construction of many structures. Welding is a joining or repair process which induces high residual stress field, which combines with stresses resulting from in-service loads, strongly influencing in-service behaviour of weld components. A new method is proposed to reduce non uniformity of molten metal occurring because of pores and residual stresses during welding process. In the proposed model work has been made to attain the uniformity of molten metal imparting vibrations to the work piece which in turn transferred to the molten metal of the weld bead. This results in uniform molten metal with minimal formation of voids or gaps, resulting in increase of strength and hardness of weld bead. Vibration techniques have been used in welding for improving the mechanical properties of metals in the last few decades. In the present, vibrating table setup has been used for inducing random mechanical vibrations into the weld pool during welding. The designed vibratory setup produces the random vibrations in terms of rpm given to the work piece by cam shaft mechanism. An increase in the hardness of the weld pieces in the heat affected zone (HAZ) and weld bead has been observed. The above mechanism is responsible for the improvement in ultimate tensile strength of work pieces welded with vibratory setup compared to without vibration and with vibrations during welding.

**EFFECTS OF JOULE HEATING ON MHD FREE CONVECTIVE FLOWALONG A MOVING  
VERTICAL PLATE IN POROUS MEDIUM**

**Paper ID-1270**

**A paper presented by:** Reddy R.C., Reddy K.J., Ramakrishna K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The aim of this paper is to investigate the effects of Joule heating on an unsteady magnetohydrodynamic (MHD) free convective heat and mass transfer flow past a moving vertical plate in a porous medium in the presence of chemical reaction. The governing partial differential equations are reduced to a system of self-similar equations using the similarity transformations. The resultant equations are then solved numerically using the fourth-order Runge-Kutta method along with a shooting technique. The effects of governing physical parameters on velocity, temperature, and concentration as well as skin-friction coefficient, Nusselt number, and Sherwood number are computed and presented in graphical and tabular forms. Comparisons with previously published work are performed, and the results are found to be in excellent agreement.

**IOT BASED HOME AUTOMATION USING FPGA**

**Paper ID-1271**

**A paper presented by:** Abdul A.M., Krishna B.M., Murthy K.S.N., Khan H., Yaswanth M., Meghana G.,  
Madhumati G.L.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Internet of Things (IOT) had many applications in several domains; it also strides into smart homes. Controlling appliances with IOT can be easily done using Smart phone through Android apps. Home automation is one of the profound in day to day applications. Due to hasty progress in technology, Wireless Fidelity (Wi-Fi) has brought revolutionary change than compared to Wired LAN communication. Existing wireless communication devices such as Bluetooth, ZigBee and NRF24L01 etc. are limited to short range. IOT uses Wi-Fi to exchange data wirelessly for large distances using Internet. IOT module (ESP8266) is used to control the home industrial appliances in remote areas anywhere in the world. Serial Communication exchanges the data between FPGA and IOT module. Home appliances are controlled using FPGA which receives commands in serial communication from IOT Module through smart phone app. Compare to existing home automation; IOT based home automation can update device status with E-Mail alerts and also in web with IP address which can be password protected. Due to its high precision and smart phone technology helps for physically challenged and senior citizens.

**APPLYING Z-CURVE TECHNIQUE TO COMPUTE SKYLINE SET IN MULTI CRITERIA  
DECISION MAKING SYSTEM**

**Paper ID-1272**

**A paper presented by:** Saradhi T.V., Subrahmanyam K., Rao P.V., Kim H.-J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The skyline queries are the best tools to be used in distributed multi criteria decision making of web based applications for user commendations. However, as the Data dimensions are increasing size of dominance set and skyline set is also increasing. Increasing dimensionality becomes the major problem with real word databases. In skyline computation major cost depends on finding dominance tests between high dimensional objects and the order in which they are accessing. Space filling Z-curve is the best suitable way to address the challenges in skyline computation. In this proposed work, we incorporated Z-curve with optimized skyline boundary detection algorithm to effective access and early pruning. In this paper efficient hybrid index structure was proposed which takes the advantage of sorting and partition approaches to improve the storage and search efficiency. Experimental results show that our propose approach is better than the previous static skyline computation techniques in terms of searching and finding skyline set.



**INTEGRATING FPGAS WITH TRIGGER CIRCUITRY CORE SYSTEM INSERTIONS FOR  
OBSERVABILITY IN DEBUGGING PROCESS**

**Paper ID-1273**

**A paper presented by:** Murali A., Kakarla H.K., Venkat Reddy D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

To overcome the lack of observability in FPGA-based prototypes, trace-buffer insertion plays an important role in the design. But it also has a disadvantage of which it leads to the recompilation of the entire system. In this study, we introduce how the incremental techniques are used to discard the necessity of recompilation process on the circuit design and also we propose the CAD optimizations to improve the special features, routing capacity and minimizing the delay impacts. The use of these technique implementations in this circuitry, fastens the magnitudes than a full compilation. In this scenario, the incremental trace insertion is notable as higher as 98 times faster than a full compilation of the design and 25% of the memory capacity is used for tracing. The incremental circuits are more helpful for the designers only to modify by inserting the trigger circuitry rather than compiling the entire design.

**LOW POWER CMOS CIRCUIT DESIGN FOR R WAVE DETECTION AND SHAPING IN ECG**

**Paper ID-1274**

**A paper presented by:** Hari Priya D., Sastry A.S.C.S., Rao K.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

R wave is an important morphological feature in ECG which plays a vital role in identifying Cardiac arrhythmias. A band pass filter is used to detect QRS complex which after rectification is shaped into a 200ms square pulse utilizing comparator circuit with auto threshold. This is implemented in 180nm technology and is simulated using Cadence Virtuoso. The circuit is tested with simulated ECG with heart beat ranging from 40 beats/min to 200 beats/min with an operating voltage of 0.4V and total power measured is 3.997 $\mu$ W.

**SCHEME CRITIC-AN AUTOMATED OPINION MINING SYSTEM FOR POLICY MAKING**

**Paper ID-1275**

**A paper presented by:** Akkineni H., Lakshmi P.V.S., Vijaya Babu B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Social has become mainstream and ubiquitous. Our day-to-day life has always been influenced by what people think and most of the conversations are being carried out online. At the same time, citizens are becoming more enthusiastically engaged in policy issues, more empowered, and more demanding in their relations with traditional ones. Researchers identify a hunger for and reliance upon peer advice and recommendations found online and this information hunger is strongly evident in the political sphere. In any policy making considering the opinion of the public is considered to be most crucial. Around the globe governments and policy makers are working on to improve their performance by creating systems which will facilitate them in understanding their performance. However, people have difficulty, owing to their mental and physical limitations, producing consistent results when the amount of such information to be processed is huge. Automated opinion mining systems are thus needed, as subjective biases and mental limitations can be overcome with an objective opinion analysis system. The everrising expectations from ordinary citizens provide a continuing force for policy makers to provide more services and with higher standards of quality. These pressures are also reason enough to find more cost effective ways of operating so that policy makers can do more with less. The system developed helps to tap into citizen generated content helping the policy makers more effectively engage with the citizens. It helps end users actively force social media for outreach, communication and engagement with the citizens and to identify the key initiatives required to enhance citizen delight by using the concepts of sentiment analysis. In this paper, we showcase-Scheme Critic-An aspect based opinion mining system which has been developed to help the policy makers in framing their policies by collecting opinions from twitter. It is used to measure the quality of the schemes, their outputs and to measure the outcomes and impacts resulting from these outputs. We demonstrate our system based on different schemes launched in India.

**A DC-DC CONVERTER WITH BATTERY ENERGY STORAGE SYSTEM FOR ELECTRIC  
VEHICLES**

**Paper ID-1276**

**A paper presented by:** Srinivasa Kishore Babu Y., Pidikiti T.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

We The performance of DC-DC converter with battery energy storage system is analyzed for electric vehicle applications. Methods: Electrical vehicles energy and voltage levels vary for different stages of it like starting, accelerating, free running, coasting and braking. The DC-DC converter provides voltage regulation and it also lifts the source voltage to bus voltage. The battery energy storage system work like an intermediate block between input DC grid and output DC bus. The topology is capable of compensating power and voltage variation in supply and protects against power outages. The analysis of the circuit is clearly explained through MATLAB simulation. Findings: The converter is capable of providing voltage regulation, peak power leveling, compensate for power variations and is adequate for applications in Electrical Vehicles. Functionally, the circuit operates like a conventional boost converter and as well as buck converter. Applications: The converter topology presented with battery storage system widely applied in various applications such as Uninterruptible Power Supplies (UPS). These systems are standard solution when total outage or voltage sag compensation is required.

**EXTRACTION OF TWEETS USING WRAPPERS AND STREAMING API  
Paper ID-1277**

**A paper presented by:** Akkineni H., Lakshmi P.V.S., Vijaya Babu B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Ubiquitous online communication is producing massive amounts of data on an un-precedential scale. Twitter stands as a zeal bucket in sharing the meaningful public conversations, experiences and opinions on various topics like discussions on the policies launched by the government. Working on the premise that online social media conversations might represent a new source of information to throw light on the insights of the policies, this investigate figures out the process of extracting such potentially valuable data. Our paper mainly addresses the methodology of extracting the tweets regarding the government policies. In this paper, we have studied the procedure of extracting data related to government policies from Twitter using wrapper development and streaming API. Retrieving structured data from deep web is a main problem due to the essential convoluted structures of web pages. A comparative study has been done between web wrappers and the algorithm developed based on Streaming API. All of them have their innate margins but the algorithm constructed using streaming API has got its own benefits in extracting on the fly policy related tweets launched by the government.

**ADVANCED ROLE OF INTERNET OF THINGS IN THE SMART GRID TECHNOLOGY**

**Paper ID-1278**

**A paper presented by:** Mandhala V.N., Bhagavan K., Suresh Babu S., Lakshmipathi Anantha N.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Internet of things (IOT) is the process of inter connection between computer devices, digital and mechanical machines, classes and other things which will provide different identifiers. Smart technology is emerging technology for the smart grid, transport, and environment. Some of the major smart grid devices are smart home appliances and current substations etc are belongs to smart devices. All these are developed with smart technology. The aim of the smart grid is to provide unique id for the each object in the grid by using IOT. In this paper, the proposed work focuses on the theoretical model for smart grid within the IOT environment. Based on IPV6 model is the backbone for smart grid communication layer.

**DESIGN AND ANALYSYS OF PIEZOELECTRIC ENERGY HARVESTER USED IN CAR TYRES**

**Paper ID-1279**

**A paper presented by:** Siddaiah N., Prasad G.R.K., Naga Divya G., Rohith M., Prudhvisiva Sai P., Rama Koti Reddy D.V.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The main objective of this paper is to eliminate batteries and power lines and to design a MEMS energy generator to be as small, light, and strong as possible, with enough energy to power a system under a range of conditions. We have designed a micro-generator for an innovative tyre pressure monitoring system (TPMS) driven by motion. There is a great deal of interest in alternatives to batteries for TPMS systems. One of the best way to capture energy from the moving tyre, what are called "Energy Harvesters. It is usually connected to the engine by a belt and as it turns it transforms some of the mechanical energy of the engine into electricity. In this paper, we focused on enhancing the performance of piezoelectric harvesters through a multilayer and a multistep beam configuration. Based on simulation results, a MEMS Lead ZirconateTitanate (PZT-5H, PZT-5A) cantilever array with an integrated Si as substrate is designed and simulated to improve output voltage and power. For both multilayer and multistep beams we have calculated frequency, strain and corresponding voltage. Based on simulation results we have concluded that multistep with PZT-5A material having high energy density when compared with multilayer structure.

**OPTIMAL TORQUE CONTROL STRATEGY FOR A VARIABLE SPEED WIND TURBINE**

**Paper ID-1280**

**A paper presented by:** Lakshmi Narayana P., Srinivasa Kishore Babu Y., Pidikiti T.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper, an optimal torque control strategy for a variable speed wind turbine using PMSG for a standalone system is presented. By using control strategy for a generator side converter maximum power is extracted. This system is featured with output voltage controller as well as frequency controller. The system developed is suitable to handle variable load. A dump load resistor is used to dissipate the excess of power. Basically a boost converter is used to improve the dc-link voltage of this system. The results shows that the controller is successfully extracted the maximum power under variable load conditions also.



**VECTOR QUANTIZATION BASED POWER ALLOCATION FOR NON-ERGODIC COGNITIVE  
RADIO SYSTEMS**

**Paper ID-1281**

**A paper presented by: Mukherjee A., Datta A.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This Letter addresses the problem of dynamic power allocation based on spectrum sensing outputs for non-ergodic systems. On such type of systems, the power allocation for each corresponding nodes to be sensed by cognitive transmitter may not require all the time. The dynamic power allocation in nodes of each channel in cognitive radio (CR) network using vector quantization based on autocorrelation error is proposed.

**BIT ERROR RATE ANALYSIS USING CONVERGED WELCH'S METHOD FOR ENERGY  
DETECTION SPECTRUM SENSING IN COGNITIVE RADIO**

**Paper ID-1282**

**A paper presented by:** Mukherjee A., Datta A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this Letter, a novel approach is used for improving the Bit Error Rate (BER) for non-stationary environment based spectrum sensing. Here, we have considered Converged Welch's Power Spectral Density (PSD) for analyzing of power. The signal of interest is thus further studied in terms of BER keeping the antenna and channel parameters constant. The proposed method yields an improvement of 34.6% as compared with the conventional method.

**A STUDY ON DIGITAL FORENSICS IN HADOOP**

**Paper ID-1283**

**A paper presented by:** Thanekar S.A., Subrahmanyam K., Bagwan A.B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Nowadays we all are surrounded by Big data. The term 'Big Data' itself indicates huge volume, high velocity, variety and veracity i.e. uncertainty of data which gave rise to new difficulties and challenges. Hadoop is a framework which can be used for tremendous data storage and faster processing. It is freely available, easy to use and implement. Big data forensic is one of the challenges of big data. For this it is very important to know the internal details of the Hadoop. Different files are generated by Hadoop during its process. Some can be used for forensics. In our paper our focus is on digital forensics and different files generated during different processes. We have given the short description on different files generated in Hadoop. With the help of an open source tool 'Autopsy' we demonstrated that how we can perform digital forensics using automated tool and thus big data forensics can be done efficiently.

**FPGA IMPLEMENTATION OF PARTIALLY RECONFIGURABLE DNA CRYPTOGRAPHY  
METHODS THROUGH WIRELESS USING ZIGBEE**

**Paper ID-1284**

**A paper presented by:** Murali Krishna B., Madhumati G.L., Khan H.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Field Programmable Gate Arrays (FPGAs) are unlimited by applications, but fortunately limited with area. FPGAs can be integrated to various fields like system-on-chip, communication, cryptography, signal and image processing etc. The main purpose of this research paper is to implement multiple cryptography techniques using Partial Reconfiguration (PR) on FPGA. Partial Reconfiguration is a process of changing an area in FPGA without altering the other applications. The data will be encrypted and decrypted in wireless between transceiver through ZigBee communication. To convey the information safely several cryptography methods are used. DNA grouping mechanism is a piece of both encryption and information concealing utilizing a few properties of Deoxyribonucleic Acid (DNA) groupings. It is highlighted that DNA groupings have many more intriguing properties which are used for concealing of information. Three DNA strategies used for data encryption and decryption are: Insertion, Complimentary Pair and the Substitution Strategy. A new DNA-MRNA-Protein method was proposed based on DNA strategies. In each strategy, a specific reference DNA sequence is chosen and the message M is encrypted and a fake DNA sequence S' is generated. S' is sent to the receiver and the beneficiary can recognize and decrypt the message M covered up in sequence S'. A, C, G, and T are the four nucleotides which are considered in DNA sequence to encrypt and decrypt the information. Resource Utilization of the proposed method, consumes few resources compared with several cryptography techniques. Security level is enhanced in the proposed algorithm, which was designed using Verilog HDL, Synthesized & Simulated in Xilinx- ISE Simulator and results are tested on Spartan & Virtex FPGA architectures.

**EXPERIMENTAL STUDY ON STRENGTH PROPERTIES OF METAKAOLIN AND GGBS BASED  
GEOPOLYMER CONCRETE**

**Paper ID-1285**

**A paper presented by:** Sarath Chandra Kumar B., Ramesh K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Energy saving in building technology is among the most critical problems in the world. Thus it is a need to develop sustainable alternative to conventional concrete utilizing more environmental friendly materials. One of the possibilities to work out is the massive usage of geopolymer concrete to turn them to useful environmental friendly and technologically advantages cementitious materials. In the present study metakaolin and Ground Granulated Blast furnace slag (GGBS) is used to produce geopolymer concrete. Geopolymer concrete is prepared by using alkaline solution of sodium silicate mixed with sodium hydroxide in the ratio of sodium silicate to sodium hydroxide is 2.5 and the concentration of sodium hydroxide is 10M is considered in this experimental investigation. The geopolymer concrete specimens with different proportions of Metakaolin and GGBS were cast and tested for compressive strength, Split Tensile Strength and Flexural Strength for 3, 7 and 28 days and cured at ambient temperature.

**PERFORMANCE ANALYSIS OF PWM CONTROL OF THREE-PHASE BOOST-DERIVED HYBRID  
CONVERTER**

**Paper ID-1286**

**A paper presented by:** Murthy V.N.S.R., Venu Gopala Rao M., Pandian A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper proposes a power converter architecture which can provide a step-up dc and a three-phase ac output simultaneously from a single dc input in a single-stage conversion. This architecture, named three-phase boost-derived hybrid converter (3-BDHC), is derived from a conventional boost converter by replacing the control switch with a three-phase bridge network. Compared to conventional voltage source inverters, the 3-BDHC topology has inherent shoot-through protection capability and continuous input current. Since the boost and the inverter functions are integrated within a single architecture, the power processing density of the overall system is higher and the coordination of power flow into two different outputs becomes easier. Both the step-up dc and the three-phase ac outputs can be independently regulated. In addition to a conventional 3-BDHC, this paper also describes the 3-BDHC topology where the neutral of the three-phase filter is connected to the split-dc output capacitor. This split-dc capacitor arrangement allows for independent control of each of the three-phase voltages at unbalanced load conditions. A suitable pulse-width-modulation (PWM) control strategy for the purpose of regulation of each of the outputs (dc and ac) has been described. Experimental results have been shown to validate the converter operation, when a single dc input provides a step-up dc and a three-phase ac using a 150 W experimental prototype; the ac output is generated at fundamental frequencies of 50 Hz and 400 Hz.

**DETECTION AND PERFORMANCE ANALYSIS OF WORMHOLE ATTACK IN MANET USING  
DELPHI TECHNIQUE**

**Paper ID-1287**

**A paper presented by:** Arora S.K., Ayushree  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Security is one of the primary issue in the Mobile Adhoc Network (MANET) particularly as for the size and complex nature of the system. The principle reason of security issues in MANET is that there is no physical connection between the nodes. This paper gives the impact of wormhole attack and discloses how to provide security to the packets with the help of Delphi technique. By applying Delay Per Hop Indicator (DELPHI), nodes which are the responsible for wormhole attack can be removed with the support of hop count method and AODV routing The metrics used for calculating network presentation are packet loss, throughput and end to end delay, which gives the better Quality of Services.

**INFLUENCE OF THERMAL DUST AS AN ADMIX IN CONCRETE MIX**

**Paper ID-1288**

**A paper presented by:** Chowdary Ch.M., Kishore I.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The Iron industries produce a huge quantity of slag and dust as by-product, which is a non-biodegradable waste material from that only a small percentage of it is used by cement industries to manufacture cement. In the present investigation thermal dust from local industries has been utilized to find its suitability which is used as an admixture in concrete making would lead to considerable environmental benefits. A comparison of bottom ash and boiler slag is been collected and among these both we have chosen bottom ash. The experimental study of bottom ash on normal strength concrete grade for 2% and 4% replacement cube were also prepared respectively.



**DEVELOPMENT OF AN EXPERT SYSTEM FOR DIAGNOSIS OF BEARING FAULTS OF  
ROTATING COMPONENTS IN A POWER PLANT**

**Paper ID-1289**

**A paper presented by:** Prasad G.D., Ramji K., Sundara Siva Rao B.S.K., Sai Siva A.P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Today era of machines influenced the maintenance engineer to upkeep equipment in good condition apart from this he needs to consider quality, reliability, safety and most essential productivity. This puts the Maintenance department to pick "Condition Monitoring" which is predictive kind of maintenance method for upkeep of a machine, which includes in identifying the initial issues present in machine ahead of time and gives time to fix them. The Vibration based monitoring of machine is highly effective due to its wide application and effective way to detect faults. It is used to evaluate condition of rotating like Boiler Feed Pump Trains, Turbines and Windmills. The present work highlights monitoring of Boiler Feed Pump and Turbine assembly health by analysing Tri-axial data. Considering the velocity as important parameter, the Tri-axial velocity in different directions are compared to limiting velocity for a particular speed approved from Indian Standard Organisation which are based on ISO 2372. Then based on conditions the possible faults can be predicted. Mode shapes for different shafts are generated from ANSYS. In order to reflect the above work an Expert system is developed in Java Jframe using Netbeans IDE. The Expert system which is named as EXSYSTEM is meant to take input as velocities in different directions and predict the possible faults along with remedial measures.

**MITIGATION OF IONOSPHERIC SCINTILLATIONS FOR GPS SIGNALS UNDER  
GEOMAGNETIC STORM CONDITIONS USING LMS ADAPTIVE FILTER**

**Paper ID-1290**

**A paper presented by:** Sridhar M., Raju K.P., Rao C.S., Ratnam D.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Ionospheric scintillation, an effect due to the electron content density irregularities, is one of the various phenomena of ionosphere that causes deep and rapid signal fading. Scintillations not only cause deep signal fading, but also affect GPS/satellite-based augmentation (SBAS) receiver pseudo range and carrier measurements. As India comes under the low latitude region, more care has to be taken for providing ionospheric differential corrections to GPS users. GPS data collected at KL University (Geographic 16.31°N, 80.37°E) Vaddeswaram, India is considered for the analysis. This location falls under the transition zone between the equatorial trough and the anomaly crest in Indian region. In this paper, spectral analysis of amplitude and phase scintillations is carried out during intense geomagnetic storms, occurred during the period 2013-2014. Statistical parameters of the GPS signal such as scintillation index and power spectral density (PSD) are discussed. LMS adaptive filter turns to be the appropriate filter in mitigating the scintillations. These results would be very much useful for developing a suitable model for ionospheric scintillation for the location.

**MODAL TESTING AND FINITE ELEMENT ANALYSIS OF CRACK EFFECTS ON TURBINE  
BLADES**

**Paper ID-1291**

**A paper presented by:** Ravi Prakash Babu K., Kumar B.R., Rao K.M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The study of vibration response of a turbine blade helps to detect the crack presence in the blade which alters its dynamic characteristics. The change is characterized by changes in the modal parameters associated with natural frequencies. In this paper, study of vibration response is made for turbine blade in the presence of a crack like defect. Turbine blade is initially assumed as a cantilever beam. Modal testing has been carried out for both the beams with different crack depth and crack location ratios using FFT spectrum analyzer and ANSYS software. From the analysis, it has been observed that the crack depth and its location have noticeable effect on the natural frequencies. Later the same cantilever beam was twisted with different angle of twists to validate the cantilever beam model to turbine blade.

**BANDWIDTH ENHANCED ELECTROMAGNETIC BANDGAP STRUCTURE STRUCTURED  
CLOSED GROUND MONOPOLE ANTENNA**

**Paper ID-1292**

**A paper presented by:** Srinivas M.S.S.S., Ramakrishna T.V., Madhav B.T.P., Rama Rao S.V., Ashraf Ali S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The primary barrier to implement microstrip patch antennas in modern broadband communication systems are their narrow bandwidth. For broadband antennas some of the characteristics are very essential like feed impedance matching, patch geometry optimization and suppression of surface waves etc. To improve impedance bandwidth low permittivity substrate with increased thickness is required. But by taking low permittivity with substrate thickness, the surface wave related problems will be raised. To overcome this problem a coplanar wave guide fed square patch monopole antenna with closed ground structure is proposed in this paper and electromagnetic band gap structure is added to the antenna design to enhance the impedance bandwidth, this being the aim of the present work. Antenna with square patch and closed ground structure is designed to resonate at dual band and by adding Electromagnetic Bandgap Structure (EBG) structure without closed ground structure in the design the modified antenna is resonating at triple band. To enhance the bandwidth and to suppress the surface waves related problems, we incorporated EBG structure and closed ground structure in the proposed antenna model. The proposed model attained bandwidth more than 10.7 GHz with impedance bandwidth of 82.3%. In this design the HFSS electromagnetic simulator tool results are in good agreement with fabricated antenna measured results over ZNB 20 vector network analyzer.

**AN EFFICIENT COMPONENT BASED SOFTWARE ARCHITECTURE MODEL USING HYBRID  
PSO - CS ALGORITHM**

**Paper ID-1293**

**A paper presented by:** Bolisetty P.K., Yalla P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The Software architecture is generated by using the interfaces and structural components of the software systems in an organization. Software architecture, along with the structure and behavior, also concerned with functionality, performance, reuse, economic and technological constraints etc. In software its components are related to one another in large variety of ways. The main intension of our research is to build the component based software architecture with adaptive configurations using Particle Swarm Optimization and clustering techniques. Building architecture is an inspiring progression. In this paper, we will propose Hybrid Particle Swarm Optimization (PSO) - Cuckoo Search (CS) algorithm for developing an adaptive software architecture based on the Process control model. Initially, the components are selected based on testcases generated. After that, adaptive architecture will be built by using PSO - CS on the basis of clustering results. The architecture is built along with its functional requirements, responsibility and evaluation. The functional requirements are given as graphs of functional responsibilities where modifiability, efficiency and traceability are considered as the quality attributes. The proposed method produced solution with increased quality and better metric values.

**UNDERSEA MANEUVERING TARGET TRACKING USING NOVEL ESTIMATION ALGORITHM  
Paper ID-1294**

**A paper presented by:** Sampath Dakshina Murthy A., Koteswara Rao S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, Indi

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**Abstract:**

In underwater scenario, algorithms that assume constant velocity model are suitable for tracking non maneuvering targets but fail if target is maneuvering. The Interacting Multiple Model algorithm is a widely accepted state estimation scheme for solving maneuvering target tracking problems. This paper presents the IMM method of tracking under water maneuvering targets using active sonar measurements. UKF is used throughout the process and the simulation results for two scenarios are presented.

**PREDICTION OF TROPICAL CYCLONE OVER NORTH INDIAN OCEAN USING WRF MODEL:  
SENSITIVITY TO SCATTEROMETER WINDS, ATOVS AND ATMS RADIANCES**

**Paper ID-1295**

**A paper presented by:** Dodla V.B., Srinivas D., Dasari H.P., Gubbala C.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Tropical cyclone prediction, in terms of intensification and movement, is important for disaster management and mitigation. Hitherto, research studies were focused on this issue that lead to improvement in numerical models, initial data with data assimilation, physical parameterizations and application of ensemble prediction. Weather Research and Forecasting (WRF) model is the state-of-art model for cyclone prediction. In the present study, prediction of tropical cyclone (Phailin, 2013) that formed in the North Indian Ocean (NIO) with and without data assimilation using WRF model has been made to assess impacts of data assimilation. WRF model was designed to have nested two domains of 15 and 5 km resolutions. In the present study, numerical experiments are made without and with the assimilation of scatterometer winds, and radiances from ATOVS and ATMS. The model performance was assessed in respect to the movement and intensification of cyclone. ATOVS data assimilation experiment had produced the best prediction with least errors less than 100 km up to 60 hours and producing pre-deepening and deepening periods accurately. The Control and SCAT wind assimilation experiments have shown good track but the errors were 150-200 km and gradual deepening from the beginning itself instead of sudden deepening.

**ANALYSIS OF OUTAGE PROBABILITY, THROUGHPUT IN HYBRID COGNITIVE RADIO  
NETWORKS WITH AND WITHOUT TRANSCEIVER IMPAIRMENTS**

**Paper ID-1296**

**A paper presented by:** Preetham C.S., Siva Ganga Prasad M., Rama Krishna T.V., Abhinav C., Monica R.,  
Harshitha K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Cognitive radios in wireless networks is the efficient way of sensing and accessing the spectrum dynamically. In this paper we analyze the outage probability and capacity of hybrid network model in cognitive radios considering transceiver impairments. Every physical device has hardware impairments which degrades the performance of the system. Majority of technical contributions in wireless communications neglect transceiver impairments, assuming ideal hardware. Transceiver impairments like IQ imbalance, phase noise etc. have greater effect on system performance. A hybrid overlay/underlay transmission scheme has been proposed. This transmission method takes the effect of transceiver impairments into consideration and finds the best channel; best relay and best relay power. In this we develop a simulation test model to evaluate the performance and outage probability of hybrid model considering transceiver impairments. The manuscript provides how the effect of hardware impairments can be modeled. The manuscript also provides the analysis of the proposed hybrid cognitive radio model with the help of a case study, which considers various practical aspects.



**EVALUATION OF VARIOUS VM BASED LOAD BALANCING PROCEDURES IN CLOUD  
ENVIRONMENT**

**Paper ID-1297**

**A paper presented by:** Dastagiraiah C., Krishna Reddy V., Pandurangarao K.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Thinking Processing is another example developing in IT environment with expansive determinations of base furthermore, sources. Fill Controlling is a vital part of distributed computing environment. Powerful load adjusting arrangement ensures effective source use by provisioning of sources to cloud client's on-interest premise in pay-as-you-say-way. Fill Controlling might indeed, even help indicating need for clients by actualizing suitable planning necessities. This archive gives different burden adjusting strategies in various cloud environment in light of particulars determined in Support Level Assertion (SLA).

**ANALYSIS OF DEDUPLICATION IN SECURE CLOUD STORAGE**

**Paper ID-1298**

**A paper presented by:** Pandu Ranga Rao K.V., Krishna Reddy V., Yakoob S.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Information deduplication is a technique for removing copy duplicates of information, and has been widely used in reasoning storage to reduce storage space and publish data transfer usage. Appealing as it is, a coming up challenge is to perform secure deduplication in cloud storage. Secure data outsourcing is main concept in cloud computing environment for processing efficient data sharing between different users in distributed cloud environment. Data storage is also efficient task in cloud so the proceedings of duplications in cloud are a crucial issue in real time cloud data storage process. In this paper we formalize different techniques/methods for secure deduplication in cloud data storage. Different techniques/methods formalize to precede their activities in duplication maintenance in secure data storage. Our final proceedings give better efficient results in secure cloud storage with different techniques/methods advantages and disadvantages in real time cloud environment.

**OPTIMAL TUNING OF FRACTIONAL ORDER PID CONTROLLER FOR AUTOMATIC VOLTAGE  
REGULATOR SYSTEM THROUGH GENETIC ALGORITHM**

**Paper ID-1299**

**A paper presented by:** Ramesh Raju N., Linga Reddy P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper a Fractional order PID controller is proposed for AVR system and its parameters are optimised through Genetic Algorithm. Results are obtained by simulation in MATLAB/SIMULINK environment with FOMCON software. The results show that the AVR system with fractional order PID controller is faster and robust compared to integer order PID controller.

**ZIGBEE BASED WIRELESS DATA TRANSMISSION WITH LDPC CODES USING FPGA**

**Paper ID-1300**

**A paper presented by:** Ushaswini Chowdary M., Murali Krishna B., Murthy K.S.N., Madhumati G.L., Khan H.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Due to advancements in wireless communication, data transmission through noisy channel demands some efficient coding techniques. A Low Density Parity Check (LDPC) code performs dependable exchange of data over a noisy channel through long distances. LDPC code is basically a linear forward error correcting code. Error detection and correction in the decoder without any additional circuitry is the key component. In this paper 3 bit LDPC code encoder and decoder is designed in Verilog HDL synthesized in Xilinx and implemented on Spartan3E FPGA. ZigBee is interfaced with FPGA to transmit data in wireless between transmitter and receiver through media.

**IMPLEMENTATION OF MULTI CHANNEL-MULTI MODE WIRELESS DIGITAL SDR RECEIVER  
BASED ON INTEGRATED SIX PORT TECHNOLOGY**

**Paper ID-1301**

**A paper presented by:** Masthan Basha S.K., Khan H.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This thesis presents a Software Defined Radio (SDR) which proves a great solution to develop a radio communication process through software. The greatest advantage of SDR is it avoids the hardware and replaces with the software which provides great flexibility to decode all different types of radio signal. Here we proposes a new six-port integrated waveguide structure and our simulation results proves a great flexibility and robustness in system configuration and software reuse of data processing by using quadrature shift keying and 16 quadrature amplitude modulation schemes. This paper presents a universal demodulator for several wireless communications.

**ANALYSIS OF KEYWORD SEARCHABLE METHODOLOGIES IN ENCRYPTED CLOUD DATA**

**Paper ID-1302**

**A paper presented by:** Yakoob S., Krishna Reddy V., Dastagiriah C.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Present days popularity of cloud computing increased concurrently with respect to out sourcing data into multiple users in cloud. However, delicate information should be secured before outsourcing for privacy requirements, which obsoletes information usage like keyword-based papers recovery. Traditionally more number of techniques/methods were introduce for information retrieval in out sourced cloud. In this paper we analyse four methods for information retrieval in outsourced data from cloud. We formalize the problem of fuzzy search from encrypted cloud data. Our analysis provides a realistic and effective data retrieval from different data cloud data storage. Boolean data retrieval is the main proceeding concept in data retrieval from cloud with respect to time and concept wised data retrieval in cloud data storage. Our analysis provides compatative analysis of different techniques to support above conditions equally with preferred results in cloud data storage.

**A COMPUTATIONAL INTELLIGENCE METHOD FOR EFFECTIVE DIAGNOSIS OF HEART  
DISEASE USING GENETIC ALGORITHM**

**Paper ID-1303**

**A paper presented by:** Siva Kumar P., Anand D., Uday Kumar V., Bhattacharyya D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In recent years improvement of new and effective medical domain applications has vital role in research. Computational Intelligence Systems (CIS) has profound influence in the enlargement of these effective medical field applications and tools. One of the prevalent diseases that world facing is heart disease. The Computational Intelligence Systems uses input clinical data from different knowledge resources throughout the world and applies this data on different computational intelligence tools that uses sophisticated algorithms. The sophisticated algorithms plays prominent role in the construction of medical clinical analysis tools. These tools may be used as an extra aid for the clinical diagnosis of the diseases for the doctors and clinicians. In this paper a novel method for the diagnosis of heart disease has been proposed using Genetic Algorithms. In this approach an effective association rules are inferred using Genetic Algorithm approach which uses tournament selection, crossover, mutation and new proposed fitness function. The Cleaveland data set is used for the experimentation. This data set is collected from the UCI machine learning repository experimental results are prominent when compared with some of the supervised learning techniques.

**REAL-TIME RULE-BASED SCHEDULING SYSTEM FOR INTEGRATED DELIVERY IN A  
SEMICONDUCTOR MANUFACTURING USING EVOLUTIONARY ALGORITHM-BASED  
SIMULATION APPROACH**

**Paper ID-1304**

**A paper presented by:** Manupati V.K., Revanth A.S., Srikanth K.S.S.L., Maheedhar A., Sreekara Reddy  
M.B.S.

Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In a wafer fabrication facility, automated material handling system (AMHS) to dispatch the material flow is a critical and challenging task. This paper investigates the integrated delivery of automated material handling system (AMHS) and processing tools for a large-scale complex wafer fabrication facility. Although the dispatching rules are one of the most frequently used approach for effective semiconductor manufacturing schedule, it is necessary to adapt new techniques due to time-consuming nature of dispatching rules when the number of variables and iterations increases. There are very few studies on enhancing the rule-based scheduling system. To address this issue, we proposed an evolutionary algorithmic approach for enhancing the rule-based scheduling system. We explored the best possible genetic algorithm parameters from famous approach called Taguchi, and then, statistical analysis, i.e., regression analysis, has been conducted to find out the significance of the parameters. Later, with hierarchical rule-based scheduling approach, the combined sequential dispatching rules are formed to achieve better efficiency and effectiveness of the scheduling.



**MULTIUSER DETECTION USING PARTICLE SWARM OPTIMIZATION OVER FADING  
CHANNELS WITH IMPULSIVE NOISE**

**Paper ID-1305**

**A paper presented by:** Vempati S.R., Khan H., Tipparti A.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The direct sequence-code division multiple access (DS-CDMA) signals are transmitted over multipath channels that introduce fading and shadowing. Combined effect of multipath fading and shadowing along with Multiple Access Interference (MAI) and Inter-Symbol Interference (ISI) worsens the system performance. Further, experimental results have confirmed the presence of impulsive noise in wireless mobile communication channels. Hence, this paper presents a Particle Swarm Optimization (PSO) based multiuser detection technique for DS-CDMA systems over Rayleigh, Nakagami-n (Rice), Nakagami-m and Generalized-K (GK) fading channels in presence of impulsive noise. Impulsive noise is modeled by two-term Gaussian mixture noise and white Laplace noise. Maximal ratio combining (MRC) receive diversity is also incorporated to mitigate the effects of fading and shadowing. Performance of proposed M-estimator based detector is analyzed by evaluating average error rate. Simulation results show that the proposed M-estimator based detector performs better in the presence of fading, shadowing and heavy-tailed impulsive noise when compared to least squares, Huber and Hampel M-estimator based detectors.

**PERFORMANCE ANALYSIS OF ARTIFICIAL NEURAL NETWORK AND NEURO-FUZZY  
CONTROLLED SHUNT HYBRID ACTIVE POWER FILTER FOR POWER CONDITIONING**

**Paper ID-1306**

**A paper presented by:** Somlal J., Rao M.V.G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Harmonics are developed in the power systems at various stages with the increased role of power electronic converters. Harmonics reduces the quality of power systems results in instability and voltage distortion. Several filtering techniques with different controllers have been proposed earlier for reducing the harmonics, but accurate and fast controllers are needed. This paper presents different intelligent control techniques such as artificial neural network (ANN) and neuro-fuzzy controllers for shunt hybrid active power filter (SHAPF), based on feed forward-type (trained by a back propagation algorithm) ANN and mamdani-type neuro-fuzzy method for mitigating the harmonics in the distribution system. In SHAPF, the active power filters (APF) mainly uses the energy of the capacitor in order to maintain its DC-link bus voltage and thus reduces the time of the transient response when there is abrupt variation in the load. The suggested control techniques are usually appropriate for any type of other APF. The proposed control strategies for SHAPF have been constructed in MATLAB/SIMULINK environment. In this paper, simulation results of both the methods are presented, it is observed that there is a considerable reduction in harmonics with both controllers.

**PARTITIONED CONVOLUTION ANALYSIS FOR STEREO INPUTS BASED THREE CHANNEL  
OPTIMAL SOURCE DISTRIBUTION ON HETEROGENEOUS PARALLEL COMPUTING  
PLATFORMS USING OPENCCL**

**Paper ID-1307**

**A paper presented by:** Chunduri S.R., Dhulipalla V.R., Somayajula L.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Partitioned convolutions are the best methods to address the system performance related issues in 3D virtualization techniques both in terms of latency and computational complexity. General DSP processor architectures are not suitable to implement very long filters due to increase in computational complexity and required on-chip memory. In this paper, an efficient method called Mixed Non-uniform partitioned convolution is explained to overcome computational problems for implementing three channel OSD (Optimal Source Distribution) with stereo inputs on heterogeneous parallel computing platforms. With the massive parallel computing architecture, the partitioning scheme used for this method prove that it is possible to implement OSD system containing 6 filters, each filter has a filter length of 65536 (32-bit floating point) on these platforms. The proposed algorithms were implemented on AMD based Bonaire GPU using task parallelism. The advantage of proposed method is that it provides zero output latency, which is desired in real-time applications. The computational performance and the system cost of proposed method was compared with existing approaches. The performance comparison clearly provides information that the proposed approach is suitable for implementation of OSD system at very long filter lengths with reasonable system cost in terms of compute units.

**PERFORMANCE EVALUATION OF LTE SYSTEMS IN MULTI-PATH CHANNELS**

**Paper ID-1308**

**A paper presented by:** Vempati S.R., Khan H., Kumar T.A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this paper, we analysis the performance of multiuser multiple<sup>c</sup>input multiple-output (MU-MIMO) Schemes in long-term evolution (LTE). As the performance metric, block error rate and throughput are evaluated in terms of signal-to-noise ratio (SNR) for different MIMO schemes defined as in LTE. To achieve the high throughput required by the downlink LTE systems spatial multiplexing and transmit diversity transmission modes are used. The Block error rate (BLER) performance of the proposed systems is studied under different Multi-path channels. Simulation results show the under multi-path channel, BLER of LTE system is effectively reduced using transmission modes.

**SOCIAL NETWORK ANALYSIS BASED EVOLUTIONARY ALGORITHMIC APPROACH TO  
IDENTIFY THE INFLUENCE OF HUBS ON FLEXIBLE SCHEDULING PROBLEMS**

**Paper ID-1309**

**A paper presented by:** Sreekar Reddy M.B.S., Ratnam C.H., Sharma I.V., Manupati V.K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The Flexible and Dynamic Job Shop Scheduling (FJSSP and DJSSP) have explicit benefits in the new age customized manufacturing environment by ways to efficaciously minimize the maximal completion of all operations on the machines for the efficient performance of the system. This paper seeks to utilize an approach called Social Network Analysis Method (SNAM) to evaluate the identified key machines in FJSSP and DJSSP using Social Network Analysis as a tool and analyzing their impact on the manufacturing system performance. Considering the two important Job Shop Scheduling problems, we propose to build their mathematical models with respect to the constraints and a framework of SNAM to generate the collaboration networks. The collaboration networks are obtained by transforming the input data and presenting it in the form of an affiliation matrix using network analysis software packages. Eventually, we conducted various tests to analyze the collaboration networks for identifying the key machines whose effectiveness and stability has been determined by multi-objective based hybrid NSGA-II algorithm.

**EFFORT MONITORING AND TRACKING SYSTEM**

**Paper ID-1310**

**A paper presented by:** Rajesh Kumar T., Anand D., Rama Krishna Srinivas G., Bhattacharyya D., Kim H.-J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Prime Leading organizations will use the web portal for effort monitoring and tracking. This portal is used to store and analyze the employee effort from various R&D departments. This portal provides a front end environment for employees/management of an organization to keep a track of his/her effort. It is also expected to use SharePoint advanced features such as content management, alerts, information management policies, collaboration features, reporting, and analytics services.

**PERFORMANCE EVALUATION OF FEATURE SELECTION METHODS ON LARGE  
DIMENSIONAL DATABASES**

**Paper ID-1311**

**A paper presented by:** Leela Sandhya Rani Y., Sucharita V., Bhattacharyya D., Kim H.-J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Data mining retrieves knowledge information from larger amounts of data. Clustering is an assemble of similar objects in to one class and dissimilar objects in to another class. When designing clustering ensemble on large dimensional data space, both time and space requirements for processing may be overinflated. This tends to impose feature selection methods to remove redundant features and handle the noise data. There are filter, wrapper and hybrid methods in feature selection. This paper shows a tour on types of feature selection techniques and numbers of experiments are conducted to compare feature selection techniques using different datasets with R tool, which gives better technique for clustering ensemble design.

**KEY AGGREGATE BASED HOMOMORPHIC ENCRYPTION FOR EFFICIENT  
AUTHENTICATION FOR SECURE CLOUD STORAGE**

**Paper ID-1312**

**A paper presented by:** Ramya K.R., Malleswari D.N., Rani C.R., Bhattacharyya D., Kim H.-J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Now a day's data outsourcing is the main focusing term in real time cloud computing applications. Secure data outsourcing is another real time intellectual concept in cloud computing applications for proceeding efficient data transmission. Conventionally Attribute Based Encryption (ABE) performs efficient data security of data outsourcing in cloud. It performs effective data security based on attributes of uploaded data for storage. Attributes are key terms for converting plain file data to Meta (cipher) file, so every time attribute extraction is complexity in data storage in cloud for efficient security analysis. We describe new public cryptographic system which effects fixed size for efficient delegation of decryptions for cipher-texts. So in this paper we propose to KAE (Key Aggregate Encryption) for efficient data security for providing. The novelty is one can aggregate any set of secret keys and make them as complete with single key with power of all the keys been aggregated. We provide security analysis as a development in real time cloud applications for processing access control data delivery between users present in cloud. Our experimental results show efficient security with access control policies in data storage in cloud.



**OPTIMUM SHUNT ACTIVE POWER FILTER FOR LOAD COMPENSATION: A COMPARITIVE  
STUDY**

**Paper ID-1313**

**A paper presented by:** Yamarthi R.B., Srinivasarao R., Linga Reddy P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Today the uses of non-linear loads in industrial, commercial and domestic areas have risen to harmonic problems. Harmonics leads to disoperation in loads connected at Point of Common Coupling (PCC). Shunt Active Power Filter (SAPF) is proposed to improve Power Quality under non linear load condition by compensating the current harmonics. The performance of SAPF depends on the controller adopted for SAPF. Recently Artificial Bee Colony (ABC) optimization technique proposed by the inspiration of the foraging behavior of honey bees. ABC optimization is a meta-heuristic approach of swarm intelligence. In this paper the performance of ABC-SAPF is compared with conventional, Genetic Algorithm (GA), Particle Swarm Optimization (PSO), Bacterial Foraging(BF) tuned SAPF.

**ILLUMINATION INVARIANT FACE RECOGNITION MODEL USING TETROLET TRANSFORM  
AND TRUNCATED GAUSSIAN MIXTURE MODEL**

**Paper ID-1314**

**A paper presented by:** Jagadesh B.N., Shaik N.S., Mandhala V.N., Bhattacharyya D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Face Recognition is the most focused topic in the field of computer vision and pattern recognition. It has become a major thrust area for research in the last two decades due to the security aspects and demand for video. Face is focus of attention in the social intercourse and it plays a vital role in identification and recognition of individual emotions. Several facial recognition algorithms were developed and discussed in the literature but very little work is focused on facial recognition based on illumination. The appearance of the face image is usually affected by illumination conditions that hinder the facial recognition process. Hence in this paper, we propose and develop a new facial recognition algorithm based on Adaptive Haar Wavelet Transform called Tetrolet Transform. In Tetrolet transform, the determined orthonormal basis functions are adapted to geometrical features of the image follow a Truncated Gaussian Mixture Model (TGMM). The truncation on the feature vector has a significant influence in improving the recognition rate of the system.

**PREDICTION MODEL OF SURVIVAL ANALYSIS FOR CUSTOMER RELATIONSHIP  
MANAGEMENT**

**Paper ID-1315**

**A paper presented by:** Velu C.M., Yamini Devi J., Dhulipalla V.K., Bhattacharyya D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The survival analysis examines life-time of an item or human being or an animal. For example, 1) employee satisfaction may lie in promotion in a particular company. 2) Similarly, medical researchers are keenly interested in survival of patients by giving an excellent treatment for dangerous diseases. 3) For engineering equipment's, reliability, availability of a component or an item plays major role in one of the following replacement policy: i)Individual replacement of an item ii)Group replacement of items iii)both (i) and (ii), to be adopted for the smooth functioning of the system to avoid shut down in a manufacturing company. 4) Some specific examples in medicine are after giving chemotherapy for a particular cancer, the patient lives many years beyond of medical history. As an example, if we know a patient survives 60 months and is then censored, use is made of the fact that the patient lived during the first 60 months. After the time of censoring, the censored value is dropped from any survival calculations. Considering our example, we don't know how much beyond 60 months the patient survived, so this data is not used in calculating the survival function beyond that point. In this way survival analysis makes use of censored data. In both survival tables and plots, censored events are noted. In this paper, we wish to build prediction model for the survival of a particular item or human being. We use Kaplan-Meir Method (KMM) to study the same.

**CIPHERTEXT-POLICY ATTRIBUTE-BASED ENCRYPTION FOR ACCESS CONTROL OF DATA  
IN CLOUD**

**Paper ID-1316**

**A paper presented by:** Paruchuri V.L., Anantha N.L., Konagala V.L., Bhattacharyya D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In Distributed systems, the users with a certain set of attributes can only be able to access the data. At present this process can be done through a trusted server where we will store the data and there will be certain constraints on the access of the data. In this case there will be a possibility to compromise the data and so the confidentiality of the data is lost. An Attribute-Based Encryption (ABE) is an encryption scheme, where users with some attributes can decrypt ciphertexts associated with these attributes. Now this is our turn to develop a system with a more complex policy of access of the encrypted data and which can be called as Ciphertext Policy Attribute-based Encryption (CP-ABE). By using this method the information can't be traded off even through the trusted server where the information is put away. These methods are also secure against the collusion attack. In this method attributes are generally assigned in the form of access trees. The attributes are placed at the leaf nodes of this access tree. In older Attribute-based encryption strategies encrypted data is described by the attributes and policies are given to the user's keys, while in our system users credentials are described by the attributes and there will be a policy where it tells us about who should access or decrypt the data. So, this type of access method is very much closer to the Role-based attribute-based encryption.

**LIGHT-WEIGHTED DNA-BASED CRYPTOGRAPHIC MECHANISM AGAINST CHOSEN CIPHER  
TEXT ATTACKS**

**Paper ID-1317**

**A paper presented by:** Suresh Babu E., Nagaraju C., Krishna Prasad M.H.M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

DNA cryptography is a new cryptographic paradigm from hastily growing biomolecular computation, as its computational power will determine next generation computing. As technology is growing much faster, data protection is getting more important and it is necessary to design the unbreakable encryption technology to protect the information. In this paper, we proposed a biotic DNA-based secret key cryptographic mechanism, seeing as DNA computing had made great strides in ultracompact information storage, vast parallelism, and exceptional energy efficiency. This Biotic Pseudo DNA cryptography method is based upon the genetic information on biological systems. This method makes use of splicing system to improve security and random multiple key sequence to increase the degree of diffusion and confusion, which makes resulting cipher texts difficult to decipher and makes to realize a perfect secrecy system. Moreover, we also modeled the DNA-assembled public key cryptography for effective storage of public key as well as double binded encryption scheme for a given message. The formal and experimental analysis not only shows that this method is powerful against brute force attack and chosen cipher text attacks, but also it is very efficient in storage, computation as well as transmission.

**A NEW PRIVACY APPROACH USING GRAPH-EMD**

**Paper ID-1318**

**A paper presented by:** Saibaba C.H.M.H., Uday Kumar V., Praveenkumar K., Bhattacharyya D.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Privacy is the word which can listen everywhere in the data mining for data preserving. It should be provided the security to the data in many ways. Privacy should be provided to the sensitive data and micro data. Hence more number of existing techniques has been introduced to provide sensitive data. Many third party service providers are showing interest to release the data which is collected for research purpose. Existing systems like k-anonymity, l-diversity and t-closeness are already existed but they can't provide better privacy measures. Each existing method carries different types of problems. The t-closeness is the more flexible privacy model called (n,t)-closeness will provide the better privacy and usage. Proposed Closeness measures require Probability distribution that is assessed using Earth Mover's Distance (EMD) measurement. In this paper, the graph based algorithm graph-EMD. Compare with tree-EMD, graph EMD performs more flexible. The number of unknown variables is reduced to  $O(N)$  from  $O(N^2)$  of the original EMD. In this paper, with Graph-EMD is implemented and show the performance and efficiency.

**A NEW APPROACH FOR INTEGRATING SOCIAL DATA INTO GROUPS OF INTEREST**

**Paper ID-1319**

**A paper presented by:** Ahad A., Yalavarthi S.B., Ali Hussain M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Our daily life is connected with various social network sites with large-scale public networks like Google+, WhatsApp, Twitter, or Facebook. For sharing and publishing, the people are increasingly connected to these services. Therefore, Social network sites have become a powerful tool of contents of interest, part of which may fall into the scope of interests of a given group. There is no solution has been proposed for a group of interest to tap into social data. Therefore, we have proposed an approach for integrating social data into groups of interests. This method makes it possible to aggregate social data of the group's members and extract from these data the information relevant to the group's topic of interests. Moreover, it follows a user-centered design allowing each member to personalize his/her sharing settings and interests within their respective groups. We describe in this paper the conceptual and technical components of the proposed approach.

**MHD MIXED CONVECTION OSCILLATORY FLOW OVER A VERTICAL SURFACE IN A  
POROUS MEDIUM WITH CHEMICAL REACTION AND THERMAL RADIATION**

**Paper ID-1320**

**A paper presented by:** Ramana Reddy G.V., Bhaskar Reddy N., Chamkha A.J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**The present paper concerns with the study of thermal radiation and magnetohydrodynamic effects on mixed convection flow of a viscous incompressible electrically-conducting fluid through a porous medium with variable permeability in the presence of oscillatory suction. The influence of a first-order homogeneous chemical reaction, heat source and Soret effects are analyzed. The resultant governing boundary layer equations are highly nonlinear and coupled form of partial differential equations which are solved analytically using two-term harmonic and non-harmonic functions. The effects of different physical parameters on the velocity, temperature and concentration fields are discussed in detail. The results are presented graphically and discussed qualitatively.



**FAST PHASE UNWRAPPING METHOD BASED ON G-PUMA AND SPA TECHNIQUES: G-PUMA-  
SPA**

**Paper ID-1321**

**A paper presented by:** Ali S., Khan H., Shaik I., Ali F.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The problem of Phase unwrapping (PU) is solved by many Phase unwrapping algorithms. Thus far, many PU methods with high accuracy have been achieved. However, the memory utilization and CPU limitations are ignored during designing such PU algorithms. To effectively solve this problem, a fast PU method is proposed in this method. The proposed algorithm consists of two steps firstly the phase is unwrapped by using the cache efficient G-PUMA algorithm and later on, the unwrapped phase is further denoised by Second order polynomial approximation. The proposed algorithm smartly selects the window according to the smoothness and shows greater attenuation to noise. G-PUMA-SPA algorithm not only unwraps phase faster but also robust to noise. Experiments show that the proposed method can achieve better results than the method PUMA-SPA, Congruence Operation and Least Squares Fitting (CO-LSF) proposed recently.

**EFFICIENT DNA-BASED CRYPTOGRAPHIC MECHANISM TO DEFEND AND DETECT  
BLACKHOLE ATTACK IN MANETS**

**Paper ID-1322**

**A paper presented by:** Suresh Babu E., Nagaraju C., Krishna Prasad M.H.M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

This paper addresses a novel method to detect and defend against the blackhole attack and cooperative blackhole attack using hybrid DNA-based cryptography (HDC) mechanism. Moreover, the proposed method upsurge the security issue with the underlying AODV routing protocol. Eventually, this HDC is one of the high potential candidates for advanced wireless ad hoc networks, which require less communication bandwidth and memory in comparison with other cryptographic systems. The simulation results of this proposed method provide better security and network performances as compared to existing schemes.

**ADVANCED PARALLEL STRUCTURE KALMAN FILTER FOR RADAR APPLICATIONS**

**Paper ID-1323**

**A paper presented by:** Teeparti S.P., Kota C.B.R., Putrevu V.K.C., Sanagapallea K.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Normally in tracking applications, the target motion is usually modeled in Cartesian coordinates but, most sensors measure target parameters in polar coordinates. In this paper two contributions are considered in target tracking. One depends on position measurements and another one is on Doppler measurements. The position measurements are measured by taking the range and bearing (angle) of the target depending on the sensor location. Tracking the target Cartesian coordinates by using this range and bearing measurements is a nonlinear state estimation problem. To calculate the position measurements (range and angle), it is preferred to convert them to Cartesian coordinates by considering the linear form values. This is done, to avoid using nonlinear filters. This method is called as converted position measurement Kalman filter (CPMKF). In this paper another contribution is Doppler (range rate) measurement in target tracking systems. In this contribution the nonlinear pseudo states are calculated. This method is called as Converted Doppler measurement Kalman filter (CDMKF). By considering these two methods a parallel filtering structure, called statically fused converted measurement Kalman filter (SF-CMKF) is proposed. The two methods are operated along with each other to construct the new state estimator SF-CMKF by a static estimator to obtain final state estimates.

**INSPIRED PSEUDO BIOTIC DNA BASED CRYPTOGRAPHIC MECHANISM AGAINST ADAPTIVE  
CRYPTOGRAPHIC ATTACKS**

**Paper ID-1324**

**A paper presented by:** Suresh Babu E., Naga Raju C., Krishna Prasad M.H.M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

DNA Cryptography is a new cryptographic paradigm from hastily growing bio molecular computation, as its computational power will determine next generation computing. As technology is growing much faster, data protection is getting more important and it is necessary to design the unbreakable encryption technology to protect the information. In this paper, we proposed a biotic DNA based secret key cryptographic mechanism, seeing as DNA computing had made great strides in ultra-compact information storage, vast parallelism, and exceptional energy efficiency. This Biotic Pseudo DNA cryptography method is based upon the genetic information on biological systems. This method makes use of splicing system to improve security, random multiple key sequence to increase the degree of diffusion and confusion which makes resulting cipher texts difficult to decipher and makes to realize a perfect secrecy system. The formal and experimental analysis not only shows that this method is powerful against brute force attack and chosen cipher text attacks, but also it is very efficient in storage, computation as well as transmission.

**EVALUATION OF DATA MINING STRATEGIES USING FUZZY CLUSTERING IN DYNAMIC  
ENVIRONMENT**

**Paper ID-1325**

**A paper presented by:** Subbalakshmi C., Ramakrishna G., Krishna Mohan Rao S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The recent applications of data mining such as biological, scientific, financial and others are changing data regularly, which is uncertain and incomplete. For finding tendency in these data up-to-date, we need to modify existing data mining algorithms with dynamic characteristics. Soft computing methods are suitable for finding changes in uncertain data. In order to adopt change in data we can apply any of two approaches, update algorithm by ignoring earlier state or update with respect to earlier state. In this paper, we have framed two fuzzy clustering methods based on these approaches and implementation done using R software with comparison.

**USER BEHAVIOUR PROFILING IN CLOUD USING ONE CLASS SVM: A REVIEW**

**Paper ID-1326**

**A paper presented by:** Paruchuri V.L., Suresh Babu S., Sridhar P.S.V.S., Bhattacharyya D., Kim H.-J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Distributed computing guarantees to on a very basic level change the way we utilize PCs and get to and store our own specific and business data. With these new registering and correspondences models develop new data security challenges. Existing information security structures, for instance, encryption have fizzled in imagining information theft strikes, particularly those executed by an insider to the cloud supplier. We propose a substitute methodology for securing information in the cloud utilizing adversarial mimic improvement. We screen data access in the cloud and perceive unpredictable data access outlines. Right when unapproved access is suspected and after that confirmed using test questions, we dispatch a disinformation strike by giving back a considerable measure of fake information to the attacker. This secures against the misuse of the customer's real data. Trials coordinated in a neighborhood archive setting give confirmation this technique may give unprecedented levels of customer data security in a Cloud space.

**ACQUIRING BUSINESS INTELLIGENCE THROUGH TEMPORAL MINING OF SMART METER  
DATA**

**Paper ID-1327**

**A paper presented by:** Chinnam S.K.R., Krishna Prasad A.V., Premamayudu B., Vinod M., Kim H.-J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

More and more enterprises are switching over to Machine learning applications to improve their analyzing and predicting capabilities of their business. In this paper we propose a new outlook towards utility computing where public services can be view as a business. A public service can be better delivered by viewing it as a business model rather than a service model. The demand supply can be better analyzed and predicted by our model. This paper is about using efficient mining techniques on real time smart meter data for any utility like water, power or gas etc. The parameters that smart meters provide from time to time over a network can give us real time readings of the consumption which in itself adds enough intelligence to the service. Now by applying temporal mining techniques on this smart meter data we attempt to show how the Business intelligence can be improved by data analysis and analytics. Though there is an opposition from some point of views that smart meters are hazardous to health due to its RF technology we can only improve utility computing by smarter data so that the service in efficient and effective.

**REMOVAL OF ARTIFACTS FROM ELECTROCARDIOGRAM USING EFFICIENT DEAD ZONE  
LEAKY LMS ADAPTIVE ALGORITHM**

**Paper ID-1328**

**A paper presented by:** Gowri T., Rajesh Kumar P., Koti Reddy D.V.R., Rahman U.Z.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The ability to extract high resolution and valid ECG signals from contaminated recordings is an important subject in the biotelemetry systems. During ECG acquisition several artefacts strongly degrades the signal quality. The dominant artefacts encountered in ECG signal such as Power Line Interference, Muscle Artefacts, Baseline Wander, Electrode Motion Artefacts; and channel noise generated during transmission. The tiny features of ECG signal are masked due to these noises. To track random variations in noisy signals, the adaptive filter is used. In this paper, we proposed Dead Zone Leaky Least Mean Square algorithm, Leaky Least Mean Froth algorithm and Median Leaky LMS algorithms to remove PLI and EM artefacts from ECG signals. Based on these algorithms, we derived some sign based algorithms for less computational complexity. We compare the proposed algorithms with LMS algorithm, which shows better performance in weight drift problem, round off error and low steady state error. The simulation results show that Dead Zone Leaky LMS algorithm gives good correlation factor and SNR ratio.



**MULTIBAND SLOTTED APERTURE ANTENNA WITH DEFECTED GROUND STRUCTURE FOR  
C AND X-BAND COMMUNICATION APPLICATIONS**

**Paper ID-1329**

**A paper presented by:** Bhavani K.V.L., Khan H., Madhav B.T.P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A series of simulations and investigations of slotted microstrip patch antennas with defected ground structure are presented in this work. The analysis includes the effects of varying the dimensions of the feed line, patch and the ground plane. All the investigated antennas are showing good bandwidth enhancement with microstrip feeding method. In this study, different shapes of slots, in U-shape and L-shape are taken in to the account. Among all the examined antennas, proposed slot microstrip patch antenna of dimensions 15X20X1.6 mm with additional slot apertures of U and L combination is providing excellent radiation characteristics at lower frequency band of communication systems.

**GRAPH BASED GENE/PROTEIN PREDICTION AND CLUSTERING OVER UNCERTAIN  
MEDICAL DATABASES**

**Paper ID-1330**

**A paper presented by:** Bano S., Rajasekhara Rao K.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Clustering over protein or gene data is now a popular issue in biomedical databases. In general large set of gene tags are clustered using high computation techniques over gene or protein distributed data. Most of the traditional clustering techniques based on subspace, hierarchical and partitioning feature extraction. Various clustering techniques have been proposed in the literature with different cluster measures, but the performance is limited due to its spatial noise and uncertainty. In this paper, an improved graph based clustering technique was proposed to generate efficient gene or protein clusters over uncertain and noisy data. Proposed graph based visualization can effectively identify different types of genes or proteins along with relational attributes. Experimental results show proposed graph model effectively clusters the complex gene or protein data compare to conventional clustering approaches.

**PERFORMANCE EVALUATION OF QUANTITATIVE METRICS ON ANCIENT TEXT  
DOCUMENTS USING MIGT**

**Paper ID-1331**

**A paper presented by:** Venkata Rao N., Sastry A.S.C.S., Chakravarthy A.S.N., Srinivasa Rao A.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In the present world scenario Optical Character Recognition (OCR) has wide variety of applications in the text document image analysis for recognizing individual characters of any language. Digitizing the old documents is a tough job for preserving the essence of the documents to the coming eras. In this paper we are summarizing different image quantitative metrics for estimating the loss of information from the image after cleaning the noisy image by using anyone of the local or non-local thresholding techniques. The quality evaluations are made on 40 Telugu and English text documents after cleaning the documents with Modified Iterative Global Threshold (MIGT) approach.

**ANALYSIS OF CANONICAL CHARACTER SEGMENTATION TECHNIQUE FOR ANCIENT  
TELUGU TEXT DOCUMENTS**

**Paper ID-1332**

**A paper presented by:** Venkata Rao N., Sastry A.S.C.S., Chakravarthy A.S.N., Srinivasa Rao A.V.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Character Recognition in ancient document images remains a challenging task. Initial scanning process deforms the document image, while aging process of document render it ancient which turns it to possess unwanted background noise. Segmentation includes an essential process in OCR. Complex scripts like derivatives of Brahmi, encounter various problems in the segmentation process. A hybrid model that entails segmentation in noisy images followed by binarization is proposed. In the first phase, segmentation technique for the ancient Telugu document image into meaningful units is proposed. Horizontal profile pattern is convolved with Gaussian kernel. The statistical properties of meaningful units are explored through an extensive analysis of the geometrical patterns of meaningful units. In the second phase, noisy documents are cleaned with the help of Modified IGT algorithm and then segmented by using conventional profile mechanism. The performance of the present hybrid technique is proved by the results of higher efficiencies for the cleaned documents. The efficiency analysis of segmentation carried out for the present hybrid technique reveals a threshold number of Vowels (V), Consonants(C), CV core characters to exhibit higher efficiencies. It also reflects upon the non-canonical features of any other marks of the Telugu document.

**PATHWAY OF SUCROSE OXIDATION IN MANGANESE (PYROLUSITE) NODULE**

**Paper ID-1333**

**A paper presented by:** Baral A.B., Dash B., Ghosh M.K., Subbaiah T., Minakshi M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Polymetallic sea nodules are the potential resources of copper, cobalt, manganese, and nickel. The exploration and exploitation of manganese nodules are necessary to meet the future demands of Mn in the world. This work describes the valuable extraction of Mn through an innovative approach of using sucrose as a reductant. The metal extraction from the nodule leaching was studied in ambient temperature (27 °C) and at an elevated temperature 90 °C with and without agitation. In both cases, 99.9% of Mn was extracted while the extraction time appears to be significantly low (2 h) at 90 °C but it requires a longer time of 24 h at 27 °C. The optimum sucrose concentration selected was 7% (w/w) of nodule for maximum metal extraction. With use of 10% (v/v) H<sub>2</sub>SO<sub>4</sub>, 7% (w/w) sucrose at 90 °C, and solid to liquid (S/L) ratio of 1:10 the achieved metal recovery figures were the following: Mn >99%, Ni 98%, Cu 87%, Co 83% in 2 h. The oxidation pathway of sucrose is outlined in this study with the aid of mass spectrometry during reductive leaching of ocean bed nodule. Sucrose in acidic environment generates 1- or 6-monoacid of sucrose with ions of m/z (mass-to-charge ratio) 355 and 127, 5-hydroxymethylfurfural (5HMF). A dehydrated glucose complex (m/z 325) was generated at elevated temperature. These released organics act as reductant for the leaching of Mn<sup>2+</sup> from MnO<sub>2</sub>. Glucaric acid (m/z 211) is generated as the end product of the sucrose oxidation in the solution.

**HCMX: AN EFFICIENT HYBRID CLUSTERING APPROACH FOR MULTI-VERSION XML  
DOCUMENTS**

**Paper ID-1334**

**A paper presented by: Sonawane V., Rajeswara Rao D.**  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In order to retrieve useful information from large number of growing XML documents on the web, effective management of XML document is essential. One solution is to cluster XML documents to find knowledge that promote effective information management and maintenance. But in the real world XML documents are dynamic in nature. In contrast to static XML documents, changes from one version of XML document to another version cannot be predicted. So clustering technique of static XML documents cannot be used to cluster multiple versions of XML documents. In case of multiversion XML documents, preliminary clustering solution is not become valid after document versions appear. XML documents are self descriptive in nature, which results in large document size. To find new clustering solution after change, comparisons between all documents is not viable solution. In this paper we have proposed hybrid clustering approach to cluster multiversion XML documents. This approach improves speed of clustering by limiting the growing size of XML documents by using homo-morphic compression scheme and using distance information from preliminary clustering solution with the changes recorded in compressed delta.

**COMPARATIVE ANALYSIS OF PATH LOSS ATTENUATION AT OUTDOOR FOR 1.8GHZ,  
2.1GHZ IN URBAN ENVIRONMENT**

**Paper ID-1335**

**A paper presented by:** Ramesh N.V.K., Sarat Kumar K., Venkata Ratnam D., Hussain A., Sai Jaswanth Y.V.,  
Sarat Chaitanya P.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

We investigated the radio signal path attenuation behavior by conducting a measurement survey in a GSM network, which is transmitting at 1.8GHz and 2.1GHz band in the Vijayawada city, Andhra Pradesh, India. Initially the measured field strength data collected at various locations from the base stations are used to estimate the path loss. It has been observed that the path loss increases with distance in this case. In this paper a detailed analysis for the calculation of path loss by using Okumura Hata model and the Cost 231 Hata model. We calculated the path loss data and compared with real time data obtained for both 1.8GHz and 2.1GHz in an urban environment by using the received signal strength (RSS) of the base station with and without noise. Our experimental result shows that the Okumura Hata model is one of the best models for calculation path loss at urban environment.

**KINEMATIC ANALYSIS FOR PROSTHETIC LEG USING VIRTUAL INTERFACE**

**Paper ID-1336**

**A paper presented by:** Kalyana Chakravarthy Y., Tarun D., Harish J., Srinath A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The Kinematic analysis of the prosthetic Robotic leg so as to produce the estimated torques, and estimated velocities at each joint during the gait cycle is made, in continuation to the work related to design and fabrication of a prosthetic robotic leg, the aim of this analysis is to develop a kinematic model of robotic prosthetic leg using D-H approach. The resulting model is then used to produce inputs for the selection of actuator which drives the prosthetic robotic leg and also for the dynamic analysis of the proposed model. The kinematic model is determined based on considering the prosthetic leg as a 2D RR manipulator, and then by using the D-H matrix for the model. The obtained result from the kinematic model is used to choose a suitable actuator for the prosthetic leg.



**SHAPE PRIOR ACTIVE CONTOURS FOR COMPUTERIZED VISION BASED TRAIN ROLLING  
STOCK PARTS SEGMENTATION**

**Paper ID-1337**

**A paper presented by:** Kishore P.V.V., Prasad C.R.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Computer automation of rolling stock involves determination of individual parts to be examined for defect Identification from the videos of a moving train. Video frame segmentation using Chan Vese active contour model (CV-AC) results in a full bogie binary image that makes impossible to track individual parts. To segment individual parts and track their shapes along the length of the train is a challenging task. It could be achieved by using shape prior seeds (SP-CVAC) as destination contour from individual parts of the bogie for the Chan vese active contour model. Spatial distances are used to propel the initial contour towards final shape contour. The results demonstrate the quality of video segmentation algorithm based on destination seed shape priors. The quality of the proposed segmentation algorithm is computed using factual segmentation score (FSS) between shape prior and hand segmented portions of the rolling stock. Further the paper compares shape prior segmentation model with no-shape prior active contours to specify the importance of shape prior models for complex image processing tasks related to intelligent maintenance systems with computer vision.

**IMPLEMENTATION OF LOW-POWER ADAPTIVE VITERBI DECODER FOR WIRELESS  
COMMUNICATION**

**Paper ID-1338**

**A paper presented by:** Subrahmanyeswara Rao T.J.V., Aswini T.V.N.L., Venu Gopal Rao M.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

There has been a surge of research activities in the field of wireless communication which sweep of the communications industry over the few past decades. This has prone to the emerging technologies for effective communication over wireless channels. The need of data transmission rate was increased by shutting the door of noise. Thus the effects of noise in digital data transmission are reduced drastically by the use of error-detecting and correcting convolutional codes. In this paper, the decoding techniques for convolutional codes, Viterbi algorithm, and adaptive Viterbi algorithm which is based on strongly connected trellis was proposed. The Viterbi algorithm achieves its optimum performance in BER. The low power design technique, Adaptive Viterbi algorithm is applied to the decoder design to improve its power efficiency. This adaptive technique has been implemented on a FPGA and demonstrates a significant power saving at low noise levels. Viterbi decoder and adaptive Viterbi decoder was compared in terms of BER performance, which are also developed in MATLAB and FPGA. The proposed algorithm reduces the average number of ACS computations up to 70% compared to normal Viterbi algorithm, with the same BER performance. Also the improvement in BER performance was compared for different constraint lengths.

**A STUDY ON SOCIO CULTURAL FACTORS INFLUENCING INDIAN ENTREPRENEURSHIP: A  
CRITICAL EXAMINATION**

**Paper ID-1339**

**A paper presented by:** Bhoganadam S.D., Rao D.S.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

One of the emerging areas in present technology era is entrepreneurship. Much research is going on the various dimension of entrepreneurship such as: technical, economical, sociological etc because of its vital role in economic development of a nation, employment generation, innovation and creativity. However, very little research has been done on socio cultural dimension of entrepreneurship, especially in developing countries. Hence the present study concentrates on the socio cultural dimension of Indian entrepreneurship. The main objective of the study is to identify the various socio cultural factors influencing entrepreneurship along with theoretical linkages and build a conceptual framework which can be used for empirical validation. A thorough review of literature leads to the identification of six socio cultural factors that are influencing entrepreneurship: family background, education, caste, religion, social networks and social background and a set of theories which may be applicable to entrepreneurship. With the help of both empirically identified socio cultural factors and from theories relevant to entrepreneurship a conceptual model is developed. Future research may concentrates on empirical validation of the designed conceptual framework.

**TRIPLE BAND LINEARLY POLARIZED SQUARE SLOTTED MICROSTRIP ANTENNA FOR X-  
BAND APPLICATIONS**

**Paper ID-1340**

**A paper presented by:** Ramakrishna T.V., Madhav B.T.P., Manmohan G., Pavithra M., Reddy G.S.C.,  
Chaitanya P.N.S., Prasad K.B.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

A novel compact triple band antenna for X-band applications is presented in this paper. A single layered feeding is used to excite square slotted truncated cornered antenna model in the proposed work. The current antenna has been simulated using commercial electromagnetic tool ANSYS HFSS (V15.0). The proposed model is fabricated for FR4 substrate material in the dielectric constant 4.4 and the overall dimension of the antenna is around  $19.6\tilde{\text{A}}-17.9\tilde{\text{A}}-1.6\text{mm}$ . Different iterations and their corresponding antenna characteristics are simulated and analyzed in the present work. The simulation results are in good agreement with the proto type antenna model and the antenna performance characteristics are demonstrated in the frequency domain at the corresponding resonant frequencies.

**MECHANICAL CHEST COMPRESSION WITH A MEDICAL PARALLEL MANIPULATOR FOR  
CARDIOPULMONARY RESUSCITATION**

**Paper ID-1341**

**A paper presented by:** Yedukondalu G., Srinath A., Suresh Kumar J.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Background: Chest compression is the primary technique in emergency situations for resuscitating patients who have a cardiac arrest. Even for experienced personnel, it is difficult to perform chest compressions at the correct compression rate and depth. Methods: We describe a new translational three-revolute-revolute-revolute (3-RRR) parallel manipulator designed for delivering chest compressions. The kinematic and chest analyses have been carried out analytically. The motion of the parallel manipulator while performing chest compressions was simulated under experimental conditions and the results were verified in MSC ADAMS software. Results: Simulation and experimental results had more or less similar results. The proposed parallel manipulator was able to achieve 120 compressions/min (cpm) with a depth in the range 38-51mm during cardio-pulmonary resuscitation (CPR). Conclusions: The design of the manipulator makes it easy to deploy for performing chest compressions at the correct compression rate and depth, as outlined in the 2010 resuscitation guidelines.

**DATA FUSION FOR ENHANCED DEFECT DETECTABILITY IN NON-STATIONARY THERMAL  
WAVE IMAGING**

**Paper ID-1342**

**A paper presented by:** Ghali V.S., Suresh B., Hemanth A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Subsurface analysis to determine the location and the sizing of an anomaly using thermography opened avenues for the investigation of various stimulation mechanisms and processing approaches. Non-stationary thermal wave imaging caters to it by employing a suitable band of frequencies according to the depth resolution of interest at low peak powers as supported by various processing approaches. But no single method is capable to explore all the details underneath the test object surface and provide subsequent details. In order to overcome it and to embed a variety of details obtained from various processing approaches, this letter introduces fusion-based methodology by combining the details obtained from principal component and other contemporary processing approaches for quadratic frequency modulated thermal wave imaging through the experimentation carried over a carbon fiber reinforced polymer specimen.

**EFFECT OF EPOXY MODIFIERS (BAGASSE FIBER/BAGASSE ASH/COAL POWDER/COAL FLY ASH) ON MECHANICAL PROPERTIES OF EPOXY / GLASS FIBER HYBRID COMPOSITES**

**Paper ID-1343**

**A paper presented by:** Mohammed R., Ram Gopal Reddy B., Sridhar Reddy V., Ali M.A.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

In this Research work, an investigation was made on the mechanical properties of E-glass Reinforced epoxy based composites without and with filler materials (Bagasse fiber (B.F)/Bagasse Ash (B.A)/Coal powder (C.P) /Coal Fly Ash (C.F.A)) which acts as epoxy modifiers. Composites filled with 10 wt% concentration of Bagasse Fiber, Bagasse Ash, Coal Powder and Fly Ash from Coal, were fabricated by hand lay-up technique. The fabricated composites are cut in to specimens according to the ASTM standards and the mechanical properties like Tensile strength, Flexural strength, Impact strength, Inter laminar shear strength (ILSS) and tensile modulus of the specimens were determined. The Test Results shows that composite filled by 10 wt % Bagasse Ash exhibited maximum Tensile strength, flexural strength and Inter laminar shear strength when compared with the other filler composites. The composite filled by 10 wt % coal powder exhibited maximum impact strength and composites filled by 10 wt % Coal Fly Ash exhibited maximum tensile modulus.

**A RELATIVE STUDY ON SERVICE LEVEL AGREEMENTS IN CLOUD COMPUTING  
Paper ID-1344**

**A paper presented by:** Radha K., Babu S.M., Rao B.T.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

Data is growing rapidly by the business, consumers and government. To maintain and protect the data, there are rules with service level agreements. Service level agreements are major considerations for each consumer. Each Consumer has a Service Level Agreement specifies that, it has an obligation on performance and service's Quality that is retrieved from the system. Service level agreement is a negotiated document in terms of service being offered to consumers. It is a legal agreement among two or more parties. SLA offers the Service Providers to differentiate them from the today's competitive, environment. Service Level Agreements can be implemented in Utility Computing and in Big Data. To monitor the Service Level Agreements in Distributed environment, Web Service Level Agreement is proposed. In this paper, Present anatomy of SLA in Cloud Computing and Best Practices for SLA in Cloud Computing and Service Level Agreements Challenges were discussed.



**A STUDY ON CLOUD BASED INTERNET OF THINGS: CLOUDIOT**

**Paper ID-1345**

**A paper presented by:** Babu S.M., Lakshmi A.J., Rao B.T.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The Next Revolution in the era of computing will be changing in comparison to traditional desktop. Many objects surrounds the human users will be on the network in one form or in another form in the Cloud Computing and Internet of Things framework. Cloud Computing and Internet of Things are two different technologies, these are into our daily life. Most of the surveys discussed the literature work on Internet of Things and Cloud separately. This paper presents the need for integration of Cloud and Internet of Things, an agent-oriented and Cloud assisted on Cloud IoT paradigm which based upon the layered reference architecture. Reference architecture for agent-oriented vision and Cloud-assisted is proposed, a Cloud based IoT paradigm applications scenario is described that have been presented in the literature, and Finally identified and discussed about open issues and future directions.

**SELECTIVE NOISE FILTERING OF SPEECH SIGNALS USING AN ADAPTIVE NEURO-FUZZY  
INFERENCE SYSTEM AS A FREQUENCY PRE-CLASSIFIER**

**Paper ID-1346**

**A paper presented by:** Lakra S., Prasad T.V., Ramakrishna G.  
Department of CSE, KL UNIVERSITY, Vaddeswaram, India

**Abstract:**

The paper relates to the filtering of a noise signal present in a speech signal. Specifically, the use of an Adaptive Neuro-Fuzzy Inference System (ANFIS) to classify the frequencies present in a speech signal into three fuzzy sets, that is, those for low frequencies, voice frequencies and high frequencies is discussed in this work. Following the pre-classification step, the low frequencies are filtered which comprise the noise component in the speech signal. The pre-classifier was applied prior to the use of various FIR/IIR filters for reducing the noise present in a speech signal. The paper presents the use of an ANFIS for pre-classification of frequencies in a speech signal followed by application of a noise filter to individual or multiple classes of frequencies. It provides evidence for substantial improvement in the quality of the speech signal.

**SECURE AND IMPLEMENTATION OF AUTHORIZED REDUPLICATION IN HYBRID CLOUD**

**Paper ID-1347**

**A paper presented by: Sri K.Ravi kumar SYAMALA VAISHNAVI**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Present several new de-duplication constructions supporting authorized duplicate check in hybrid cloud architecture. Cloud computing provides seemingly unlimited “virtualized” resources to users as services across the whole Internet, while hiding platform and implementation details. Today’s cloud service providers offer both highly available storage and massively parallel computing resources at relatively low costs. Security analysis demonstrates that our scheme is secure in terms of the definitions specified in the proposed security model. A challenging task in cloud is to reduce the amount of storage space and save bandwidth. That can be highly achieved by adopting one of the important data compression techniques for eliminating duplicate copies of repeating data called data de-duplication, and has been widely used in cloud storage to. To protect the confidentiality of sensitive data while supporting de-duplication, the convergent encryption technique has been proposed to encrypt the data before outsourcing. To better protect data security, this paper makes the first attempt to formally address the problem of authorized data de-duplication. Different from traditional de-duplication systems, the differential privileges of users are further considered in duplicate check besides the data itself. As a proof of concept, we implement a prototype of our proposed authorized duplicate check scheme and conduct test-bed experiments using our prototype. We show that our proposed authorized duplicate check scheme incurs minimal overhead compared to normal operations.

**Keywords— Deduplication, authorized duplicate check, confidentiality, hybrid cloud**

**A NEW FLYING CAPACITOR TECHNOLOGY BASED THREE PHASE POWER FACTOR  
CORRECTED RECTIFIER**

**Paper ID-1348**

**A paper presented by:** Sri K.Ravi kumar tejaswi konatam  
vamshi priya voruganti

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

A new flying capacitor technology based three phase PFC rectifier has been presented in this paper. In the paper, the effective operation of the converter is explained along with its design and the steady-state characteristics of the new converter are determined. This proposed converter has the advantage that can function with condensed input current ripple and peak switch currents because of its interleaved configuration, a uninterrupted output inductor current because of its three-level structure, and superior light-load efficiency as a quantity of its switches can be turned ON sensitively. The feasibility and effectiveness of the proposed converter is examined with simulation results obtained from MATLAB/SIMULINK software, and the converter efficiency is compared to that of another conventional multilevel converter of related type.

**Index Terms**—power factor correction rectifiers, phase-shifted modulation, single-stage converters, three-level converters, flying capacitor.

**A NOVEL APPROACH FOR DOCUMENT ANNOTATION USING CONTENT AND QUERYING  
VALUE**

**Paper ID-1349**

**A paper presented by:Sri.M. Venkateswara rao TEJESWANI NERELLA HARIKA EMANI**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

We present a novel alternative approach that facilitates the generation of the structured metadata by identifying documents that are likely to contain information of interest and this information is going to be subsequently useful for querying the database. Now a day's Most of the organizations and other institutions generate and share textual descriptions of their products, services, and actions. Such collections of textual data contain significant amount of structured information, which remains buried in the unstructured text. We present two ways to combine these two pieces of evidence, content value and querying value: a model that considers both components conditionally independent and a linear weighted model we proposed adaptive techniques to suggest relevant attributes to annotate a document, while trying to satisfy the user querying needs. Our solution is based on a probabilistic framework that considers the evidence in the document content and the query workload. While information extraction algorithms facilitate the extraction of structured relations, they are often expensive and inaccurate, especially when operating on top of text that does not contain any instances of the targeted structured information. Our approach relies on the idea that humans are more likely to add the necessary metadata during creation time, if prompted by the interface; or that it is much easier for humans (and/or algorithms) to identify the metadata when such information actually exists in the document, instead of naively prompting users to fill in forms with information that is not available in the document. As a major contribution of this paper, we present algorithms that identify structured attributes that are likely to appear within the document, by jointly utilizing the content of the text and the query workload. Our experimental evaluation shows that our approach generates superior results compared to approaches that rely only on the textual content or only on the query workload, to identify attributes of interest.

**Keywords — structure data, Annotation, adaptive forms, and collaborative platforms.**

**A NOVEL APPROACH FOR FULLY INTEGRATED THREE-LEVEL ISOLATED SINGLE -STAGE  
AC/DC PFC CONVERTER FOR LOW POWER APPLICATIONS**

**Paper ID-1350**

**A paper presented by:Sri.K.Sandheep UMASRI AYINAMPUDI N.HARIKA**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

for low-cost isolated ac/dc power converters adopting high-voltage dc-link, research efforts focus on single-stage multilevel topologies. This project proposes a new single-stage three-level isolated ac/dc PFC converter for high dc-link voltage low-power applications, achieved through an effective integration of ac/dc and dc/dc stages, where all of the switches are shared between two operations. With the proposed converter and switching scheme, input current shaping and output voltage regulation can be achieved simultaneously without introducing additional switches or switching actions. In addition, the middle two switches are turned on under zero current in discontinuous conduction mode operation, and the upper and bottom switches are turned on under zero voltage. Due to the flexible dc-link voltage structure, high power factor can be achieved at high line voltage. A 500 W/48V is designed to serve as the proof of concept, which exhibits 90.8% peak efficiency at low input line voltage.

**Index Terms**— single-stage converter, three-level converter, variable dclink voltage, zero-current switching, zero-voltage switching.

**A NOVEL APPROACH FOR REGENERATING-CODE-BASED CLOUD STORAGE- PRIVACY  
PRESERVING PUBLIC AUDITING**

**Paper ID-1351**

**A paper presented by:Sri.P.Vikram KESHAVA RAO HARISH KANNA**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Cloud computing provides access to its users to various services that it provides. The emergence of this new technology allows users to access their files, software and computing power over the web. Information proprietors have their information on cloud servers and clients can get to the information from cloud servers. Because of the information outsourcing, in any case, this new worldview of information facilitating benefit additionally presents new security challenges, which requires an autonomous examining administration to check the information honesty in the cloud. users can remotely store their data and enjoy the on-demand high quality applications and services from a shared pool of configurable computing resources, without the burden of local data storage and maintenance. However, the fact that users no longer have physical possession of the outsourced data makes the data integrity protection in Cloud Computing a formidable task. Moreover, users should be able to just use the cloud storage as if it is local, without worrying about the need to verify its integrity. Thus, enabling public auditability for cloud storage is of critical importance so that users can resort to a third party auditor (TPA) to check the integrity of outsourced data and be worry-free. In this paper, we propose a secure cloud storage system supporting privacy-preserving public auditing. we design a novel public verifiable authenticator, which is generated by a couple of keys and can be regenerated using partial keys. Thus, our scheme can completely release data owners from online burden. In addition, we randomize the encode coefficients with a pseudorandom function to preserve data privacy. Extensive security analysis shows that our scheme is provable secure under random oracle model and experimental evaluation indicates that our scheme is highly efficient and can be feasibly integrated into the regenerating-code-based cloud storage.

**Keywords — Cloud Storage, Regenerating Codes, Public Auditing, Data Integrity, Data Security.**

**A NOVEL REAL-TIME HUMAN ACTIVITY BASED ANOMALY DETECTION MODEL USING  
GRAPH BASED CLUSTERING AND CLASSIFICATION MODEL**

**Paper ID-1352**

**A paper presented by:Sri.B.Naresh Kumar Reddy, Sri.P.Gopi Krishna, VENKATA AVINASH  
KARRI,**

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Andhra Pradesh, India

**Abstract**

Detecting online abnormality in the video surveillance is a challenging issue due to streaming, video noise, outliers and resolution. Traditional trajectory based anomaly detection model which analyzes the video training patterns for anomaly detection. This paper aims to solve the problem of video noise and anomaly detection .In this paper, a novel filtered based ensemble clustering and classification model was implemented using the threshold based method, graph based clustering algorithm and classification model. Experimental results proved that the proposed model has high computation detection rate compared to traditional real-time anomaly detection models.

**Keywords—Anomaly detection, Video anomaly, Graph based clustering model.**



**A NOVEL REAL-TIME HUMAN ACTIVITY BASED ANOMALY DETECTION MODEL USING  
GRAPH BASED CLUSTERING AND CLASSIFICATION MODEL**

**Paper ID-1353**

**A paper presented by:Dr.M.Kameswara Rao, Dr.R.Bulli Babu, ASHA KOWTHARAPU,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Detecting online abnormality in the video surveillance is a challenging issue due to streaming, video noise, outliers and resolution. Traditional trajectory based anomaly detection model which analyzes the video training patterns for anomaly detection. This paper aims to solve the problem of video noise and anomaly detection .In this paper, a novel filtered based ensemble clustering and classification model was implemented using the threshold based method, graph based clustering algorithm and classification model. Experimental results proved that the proposed model has high computation detection rate compared to traditional real-time anomaly detection models.

**Keywords—Anomaly detection, Video anomaly, Graph based clustering model.**

**A NOVEL SECURITY SCHEME AGAINST SPYWARE USING SEQUENCE SELECTION OF  
CAPTCHA AS GRAPHICAL PASSWORD**

**Paper ID-1354**

**A paper presented by:Dr.K.V.Daya Sagar, Smt..P.S.G.Aruna Sri, JENNY MARTHA CHATLA,**  
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Andhra Pradesh, India

**Abstract**

know a day's many protection primitives are based on hard mathematical problems our proposed work will be based on Click-based graphical password schemes require a user to click on a set of points on one or more presented background images. With Pass Points, users create a password by clicking five ordered points anywhere on the given image. To log in, users must correctly repeat the sequence of clicks, with each click falling within an acceptable tolerance of the original point. To implement this aspect, along with a scheme converting the user-entered graphical password into a cryptographic verification key, a "robust discretization" scheme. It consisted of three overlapping grids (invisible to the user) used to determine whether the click-points of a login attempt were close enough to the original points to be accepted.

**Keywords: Graphical password, password, hotspots, CaRP, Captcha, dictionary attack, password guessing attack, security primitive.**

**A NOVEL SSTL INVERTER BASED HYBRID POWER FILTER FOR BETTER HARMONIC  
COMPENSATION**

**Paper ID-1355**

**A paper presented by:Dr.R.Bulli Babu, Dr.K.V.Daya Sagar, JENNY MARTHA CHATLA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract**

A novel SSTL inverter based hybrid power filter for better harmonic compensation has been proposed in this paper. Because of nonlinear loads such as diode and thyristor front-end rectifiers etc... Current harmonics are generated which leads to important power quality issues. Over the years there are many solutions proposed to overcome this problem. Active power filters (APFs) are majorly used for many applications to solve this power quality issue. But it has the major disadvantage that required high power rating components. To overcome this disadvantage a new hybrid power filter (HPF), has introduced, which mixes low power rating active filters with passive filters. Even though, many of these HPF topologies contain a great number of passive components and/or transformers, which leads to increase in cost and size. As a result, this paper proposes a novel SSTL inverter based hybrid power filter for better harmonic compensation without transformer. This converter has less number of switches than the conventional configurations and also capable of providing full compensation for loads with high harmonic content. Simulation results are presented and tested in order to exhibit that the harmonic compensation performance meets the IEEE 519 standards.

***Index Terms***—Active power filters (APFs), diode rectifiers, harmonics, hybrid power filters (HPFs).

**QUALITY OF SERVICE WITH A PROFIT MAXIMIZATION SCHEME WITH GUARANTEED IN  
CLOUD COMPUTING**

**Paper ID-1356**

**A paper presented by:Dr.M.Kameswara Rao, Smt P.S.G Aruna, ASHA KOWTHARAPU,**  
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Andhra Pradesh, India

**Abstract**

The cloud is a next generation platform that provides dynamic resource pools, virtualization, and high availability. Today, have the ability to utilize scalable, distributed computing environments within the confines of the Internet, a practice known as cloud computing. Cloud computing is the concept implemented to decipher the daily computing problems, likes of hardware software and resource availability unhurried by computer users. A cloud service providers view point profit is one of the most important considerations and it is mainly determined by the configuration of a cloud service platform under given market demand. But traditional single resource renting scheme cannot guarantee the quality of all requests and also wastes a large amount of resources. To overcome that weakness use Double-Quality-Guaranteed (DQG) resource renting scheme this combines long-term renting with short-term renting. For security purpose we are using attribute based encryption scheme. The result shows guaranteed the service quality of all requests, security also obtain more profit. e.g., the average charge, the ratio of requests that need temporary servers, and so forth. Thirdly, a profit maximization problem is formulated for the double renting scheme and the optimized configuration of a cloud platform is obtained by solving the profit maximization problem. Finally, a series of calculations are conducted to compare the profit of our proposed scheme with that of the single renting scheme. The results show that our scheme can not only guarantee the service quality of all requests, but also obtain more profit.

**Keywords — Cloud computing, multi-server system, profit maximization, waiting time, guaranteed service quality.**

**A REVIEW ON UNCONVENTIONAL ACCESS CONTROL APPLIANCE IN CLOUD  
ENVIRONMENT**

**Paper ID-1357**

**A paper presented by:Dr.M D Ali Hussain, Dr.M Kameswara rao Sri, MUSUNURU RUPESH  
CHOWDARY,**

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Andhra Pradesh, India

**Abstract:**

These days in IT industry cloud computing are most popular paradigms and it provides various services to the customers with price as pay for use such services are Infrastructure as a service (IaaS), Platform as a service (PaaS), software as a service (SaaS) and Data base as service (DaaS) like so many services. And all these services providing needful facilities and various benefits to its customers, but there are still Many challenges existed with cloud services such as data confidentiality, malicious inside and outside attack and lack of access control policies, so among all the challenges access control is one of the major challenge why because in order to avoid un authorized access of data and to protect sensitive data of owner. Access control grants the permission to the users which gives the right to user rights on data and other resources. Access control can be allowed in mainly of the computing setting. So in this paper we present various types of access control mechanisms that are used in cloud computing environment. Some of the access control models are Mandatory Access control models (MAC), Role Based Access control (RBAC), Attribute Based Encryption model (ABE), Identity Based Encryption model (IBE).

**Keywords: Infrastructure as a service (IaaS), Platform as a service (PaaS), software as a service (SaaS)  
Data base as service (DaaS)**

**CUSTOMER RELATIONSHIP MANAGEMENT IN BANKS**

**Paper ID-1358**

**A paper presented by:Dr.M D Ali Hussain, Dr.K V Daya Sagar, KALAVAKOLLU ANUSHA,**  
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Andhra Pradesh, India

**Abstract**

Customers are the focal point in the development of successful marketing strategy. Customer retention assumes significance in revenue analysis of various organizations. The success of CRM process depends on the active involvement of all managers and employees in the banking field a unique 'Relationship' exists between the customers and the bank. But because of various reasons and apprehensions like financial burdens, risk of failure, marketing inertia etc., many banks are still following the traditional ways of marketing and only few banks are making attempts to adapt CRM. Providing service to customers has been identified as the prime responsibility of the Banks and therefore, Banks considered that CRM is the best tool to perform the job of rendering good services. The lack of understanding on Customer Relationship Management (CRM) is always a concern among the service providers especially banks. Banks have their own way of managing their relationships with the customers. However, the perception of customers on CRM practices among banks should also be taken into consideration. CRM activity attend the needs of customers without delay in time, the banks can create more awareness to customers and can create a customer data base very significantly.

**Key words: CRM, BANK, CUSTOMER**

**TO STREAMLINE THE JOB SATISFACTION PROCESS AT THE HIGHEST AS PER THE  
COMPANY POLICIES**

**Paper ID-1359**

**A paper presented by:Dr.M D Ali Hussain, Dr.M Kameswara rao , SHAIK SHAHID AFRIDI,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract:**

Job satisfaction is an imperative piece of advice of how employees sense about their job and a predictor of work behaviour such as organizational, citizenship, Absenteeism, Turnover. Job pleasure can in part mediate the relationship of personality variables and deviant work behaviour. Widespread research finding is that job satisfaction is related with life style. This correlation is joint meaning the people who are happy with the life tends to be pleased with their jobs and the people who are satisfied their jobs tends to satisfied with their life. This is essential piece of information that is job satisfaction and job performance is unswervingly related to one another. Thus it can be said that, "A happy worker is a productive worker."It gives clear verification that unhappy employees skip work more often and more like to resign and satisfied worker likely to work longer with the organization.

**A STUDY ON TRUSTEE-BASED BACKUP AUTHENTICATION MODEL IN SOCIAL NETWORKS**

**Paper ID-1360**

**A paper presented by:Dr.M Kameswara Rao, Dr.K.V.Daya Sagar, SARANYAKUMAR  
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**Abstract**

Among the several backup authentication mechanisms, authenticating users with the help of their friends (i.e., trustee-based social authentication) has been shown to be a promising backup authentication mechanism. A user in this system is associated with a few trustees that were selected from the user's friends. When the user wants to regain access to the account, the service provider sends different verification codes to the user's trustees. The user must obtain at least  $k$  (i.e., recovery threshold) verification codes from the trustees before being directed to reset his or her password. In this paper, we provide the first systematic study about the security of trusteebased social authentications. In particular, we first introduce a novel framework of attacks, which we call forest fire attacks. A few future directions include evaluating forest fire attacks on real social authentication systems such as Facebook's Trusted Contacts, designing new attack and defense strategies, and optimizing forest fire attacks given a time constraint. In these attacks, an attacker initially obtains a small number of compromised users, and then the attacker iteratively attacks the rest of users by exploiting trustee-based social authentications. Then, we construct a probabilistic model to formalize the threats of forest fire attacks and their costs for attackers. Moreover, we introduce various defense strategies. Finally, we apply our framework to extensively evaluate various concrete attack and defense strategies using three real-world social network datasets. Our results have strong implications for the design of more secure trustee-based social authentications.

**Keywords — Social authentication, security model, backup Authentication.**



**A TRUSTED FRAMEWORK ON ENERGY EFFICIENT ROUTING PROTOCOL IN UNSECURED  
WSN**

**Paper ID-1361**

**A paper presented by:"Sri.B.Naresh Kumar Reddy, Sri.P.Gopi Krishna, , PARAGARLA VIJAY  
VARMA ,**

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Andhra Pradesh, India

**Abstract-**

Wireless Sensor Networks (WSNs) have great potential to support several important wireless applications, including real-time multimedia communication, medical applications, surveillance using sensor networks, industrial applications, military surveillance and home networking applications. But there are two challenging issues (i) communication bandwidth and (ii) energy are very important to design wireless and mobile systems because these are very much limited in network environment. Therefore it requires intelligent communication and design techniques to increase bandwidth as well as energy efficient protocol. The most efficient routing protocol LEACH (Lower Energy Adaptive Clustering Hierarchy) in wireless sensor networks (WSNs) has been incorporated by Heinzelman et.al. LEACH uses the concept of dynamic clustering when sensor nodes are deploying randomly where number of cluster impact on the network. This paper describes the network quality that depends on different characteristics of data transmission as a Modification on LEACH protocol. In this paper, we discussed and explain the comparison of magnitude, phase, phase delay, group delay, amplitude of broadcasting and energy consumption respectively.

**Keywords-** attacks; wireless sensor; energy efficient; sensor security.

**ADVANCED ALGORITHM FOR INFERRING USER SEARCH GOALS**

**Paper ID-1362**

**A paper presented by:"Sri.M Kameswara Rao, Sri.P.Gopi Krishna, , PRASUNA JUPALLI, ",**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

The fast growing field is internet in the present world. The new name for this field is Web World. Search engines are most widely used in the internet today. By using the search engines user has to satisfy the requirements. Everyday various types of users are using the searching in the internet. Every time using this searching process for every query is becoming complicated for the browser. This may cause problem for the browser performance. Inferring user search goals is also very important for user search engine. The proposed approach is used to discover different user search goals for a query by clustering the user feedback sessions. Feedback sessions are constructed from click through logs of various search engines. The method first generates pseudo-documents to better represent feedback sessions for clustering. Finally, clustering pseudo-documents to discover different user search goals and depict them with some keywords. Then these user search goals are used to restructure the web search results.

**Keywords**— User searches goals, implicit feedback sessions, pseudo-documents, restructuring search results, k-means clustering.

**ADVANCED CIPHER TEXT-POLICY ATTRIBUTE-BASED ENCRYPTION**

**Paper ID-1363**

**A paper presented by:Dr.M D Ali Hussain, Dr.R Bulli Babu, Sri, JENNY MARTHA CHATLA, V  
S N SAI KUMAR MADDIRALA,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract:**

Network connectivity is the one of the important problem for mobile nodes in military environment. Here network connectivity and frequency of the network. Disruption-tolerant network (DTN) innovations are getting to be fruitful results that permit remote device conveyed by officers to speak with one another and access the confidential data or secret data or summon dependably by abusing outside capacity nodes or storage nodes. Thus a new methodology is introduced to provide successful communication between each other as well as access the confidential information provided by some major authorities like commander or other superiors. The methodology is called Disruption-Tolerant Network (DTN). This system provides efficient scenario for authorization policies and the policies update for secure data retrieval in most challenging cases. The most promising cryptographic solution is introduced to control the access issues called Cipher text Policy Attribute Based Encryption (CP-ABE). In this paper, an advanced secure data retrieval Advanced Cipher text Policy Attribute Based Encryption (ACP-ABE). Results shows the how the proposed method implementation.

**Keywords: Access Control, attribute based encryption (ABE), disruption tolerant network (DTN), multi authority, secure data retrieval.**

**AN ADJUNCT HASH NEIGHBOUR IN 4WAY MANETS TO SHARE DATA EFFICIENTLY**

**Paper ID-1364**

**A paper presented by: Dr.M Kameswara Rao, Dr.P Gopi Krishna, DILIPKUMAR  
NAGULAVANCHA,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

To share the data in between neighbour nodes in established or fixed MANET is a big challenge. Always displaced movements MANET nodes are unpredictable with respect to their moving places in case of sharing data. And data sharing is late and sometimes hard in between deferent networks. And also compromised nodes may take advantage to take and hide the data. So to overcome these scenario we propose a new approach called SMN (Smart movement notice), EDT (Efficient data Transfer). And to transfer the data in encoded format we propose a new algorithm ROTA (Rotation orient transfer analog). All these techniques can be used across the MANETs in deferent networks. The data can be shared via non compromised hash technique in ROTA technique. All the techniques are inter related with one approach of data transfer in efficient manner. The neighbour nodes displacements are available all the times to all current network nodes and also root or master node. The master node is the key node to transfer the data to other networks in encoded formats. The data can be large and also feasible formats to transfer to legacy networks.

**Key words: MANET, SMN, EDT , ROTA, compromised nodes, hashing**

**AN IMPROVED PDR (PACKET DELIVERY RATIO) DEFINED ROUTING PROTOCOL IN LOW-  
POWER AND LOSS NETWORKS**

**Paper ID-1365**

**A paper presented by:"Sri.M D Ali Hussain, Sri.R Bulli Babu , CHANDINI DEVI GULLAPALLI,  
",**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

This study proposes a link quality aware routing protocol for low-power and lossy networks. The proposed protocol primarily considers the quality of links to determine the node rank for constructing a proper destination-oriented directed acyclic graph, on which a node may have many parents. In the proposed protocol, a node selects the node with the maximum remaining energy from all of its neighbors as the next hop to guarantee that the packet has a high probability of being forwarded toward the destination. Simulation results confirm that, compared with the routing protocol based on the hop count, the proposed protocol improves the packet delivery ratio, especially for environments with a high bit error rate. Results also show that the proposed protocol can balance the energy consumption of nodes in the network.

**Keywords: IOT, RPL, IETF.**

**AN IMPROVED PRIVACY AND SECURITY BY USING EABE**

**Paper ID-1366**

**A paper presented by:Dr., Sri N.V.K.Ramesh, Dr.R Bulli Babu, PRASUNA JUPALLI,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Outsourcing of data is improving by all the third party cloud servers. If the data owners want to store the data only authorised users can only access the data. These outsourced data should be encrypted. In this paper, a novel cryptographic primitive called unquestionable property based watchword hunt down secure cloud registering over outsourced encoded information. This primitive permits an information proprietor to control the inquiry of its outsourced encoded information as indicated by an entrance control arrangement, while the approved information clients can outsource the hunt operations to the cloud and constrain the cloud to dependably execute the pursuit (as a bamboozling cloud can be considered responsible).

**Keywords: attribute, encryption, evaluation.**

**ANALYSIS OF FACE GESTURES IN NATURAL EXPRESSIONS THROUGH VISUAL FEATURES  
IN CLASSIFICATION METHOD, VIOLA AND JONES**

**Paper ID-1367**

**A paper presented by:Dr.R Bulli Babu, Dr.M Kameswara rao Sri, NAGA SAI TEJASVI  
THUMMALA,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract:**

An integrated approach for tracking faces and specific facial features (eyes, nose, and mouth) in image sequences. For analysis of face gestures first the face and face features must get detected from the image. By using Viola and Jones algorithm both face and face gestures can be detected. And then image is provide as input for the analysis of facial expressions that humans utilize while engaged in various conversational states with robots that operate autonomously in public places. These gestures can be recognized by using Eigen Face approach. One of the main factors that limit the accuracy of facial analysis systems is hand occlusion. Hand-over-face occlusions are considered not only very common but also very challenging to handle. We detect hand-over-face occlusions and classify hand-over-face gesture descriptors in videos of natural expressions using multi-modal fusion of different state-of-the-art spatial and spatio-temporal features.

**Key words: Face features, Viola and Jones, face gestures, Eigen Face, hand occlusion, Hand-over-face occlusions, and multi-modal fusion.**

**APPLYING INTEGRITY WITH RING SIGNATURES FOR SHARED DATA IN CLOUD**

**Paper ID-1368**

**A paper presented by: Dr.K.Raghavarao, Dr.K.Kiran Kumar, MAMIDI VAMSI RAGHAVA  
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**Abstract**

The wild success of cloud data services bring the cloud commonplace for data to be not only stored in the cloud, but also shared across multiple users. Unfortunately, the integrity of cloud data is subject to skepticism due to the existence of hardware/software failures and human errors. Several mechanisms have been designed to allow both data owners and public verifiers to efficiently audit cloud data integrity without retrieving the entire data from the cloud server. However, public auditing on the integrity of shared data with these existing mechanisms will inevitably reveal confidential information—identity privacy—to public verifiers. In this paper, we propose a novel privacy-preserving mechanism that supports public auditing on shared data stored in the cloud. In particular, we exploit ring signatures to compute verification metadata needed to audit the correctness of shared data. With our mechanism, the identity of the signer on each block in shared data is kept private from public verifiers, who are able to efficiently verify shared data integrity without retrieving the entire file. In addition, our mechanism is able to perform multiple auditing tasks simultaneously instead of verifying them one by one. Our experimental results demonstrate the effectiveness and efficiency of our mechanism when auditing shared data integrity.

**Keywords — Public auditing, privacy-preserving, shared data, cloud computing**



**ANALYSIS OF FACE GESTURES IN NATURAL EXPRESSION BY EIGEN FACE BASED  
RECOGNITION**

**Paper ID-1369**

**A paper presented by: Sri.B.Naresh Kumar Reddy, Dr N K K Ramesh, VENKATA AVINASH  
KARRI,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

This approach is used to track faces and specific facial features (eyes, nose, mouth etc.) in image sequences. For analysis of face gestures we first need to detect face by giving input as image. Now face and face gestures can be detected by using viola and jones algorithm. The images are taken as input for the analysis of facial expressions that humans utilize while engaged in various conversational states with robots that operate autonomously in public places. Eigen Face approach is used to recognize gestures. One of the main factors that limit the accuracy of facial analysis systems is hand occlusion. Hand-over-face occlusions are considered not only very common but also very challenging to handle.

**ASSISTING DOCUMENT ANNOTATION BASED ON CONTENT AND QUERYING VALUE**

**Paper ID-1370**

**A paper presented by:Dr.M D Ali Hussain, Dr.N V K Ramesh, ABHISHEKH VULLIGADLA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

A annotation is metadata (e.g. a comment, explanation, presentational markup) attached to text, image, or other data. A large number of organizations today generate and share textual descriptions of their products, services, and actions. Such collections of textual data contain significant amount of structured information, which remains buried in the unstructured text. While information extraction algorithms facilitate the extraction of structured relations, they are often expensive and inaccurate, especially when operating on top of text that does not contain any instances of the targeted structured information. We present a novel alternative approach that facilitates the generation of the structured metadata by identifying documents that are likely to contain information of interest and this information is going to be subsequently useful for querying the database. Our approach relies on the idea that humans are more likely to add the necessary metadata during creation time, if prompted by the interface; or that it is much easier for humans (and/or algorithms) to identify the metadata when such information actually exists in the document, instead of naively prompting users to fill in forms with information that is not available in the document. As a major contribution of this paper, we present algorithms that identify structured attributes that are likely to appear within the document, by jointly utilizing the content of the text and the query workload. Our experimental evaluation shows that our approach generates superior results compared to approaches that rely only on the textual content or only on the query workload, to identify attributes of interest.

***Keywords — Document annotation, adaptive forms, and collaborative platforms***

**ATTACK DETECTION IN WSN USING THREE WAY SECURITY AND COMMON  
AUTHENTICATION SCHEME**

**Paper ID-1371**

**A paper presented by:Dr., Sri N.V.K.Ramesh, Dr.M Kameshwara Rao, BASWANI KAVYA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Recent developments on Wireless Sensor Networks have made their application in a wide range such as military sensing and tracking, health monitoring, traffic monitoring, video surveillance and so on. Wireless sensor nodes are restricted to computational resources, and are always deployed in a harsh, unattended or unfriendly environment. Therefore, network security becomes a tough task and it involves the authorization of admittance to data in a network. The problem of authentication and pair wise key establishment in sensor networks with mobile sink is still not solved in the mobile sink replication attacks. In q-composite key pre distribution scheme, a large number of keys are compromised by capturing a small fraction of sensor nodes by the attacker. The attacker can easily take a control of the entire network by deploying a replicated mobile sinks. Those mobile sinks which are preloaded with compromised keys are used to authenticate and initiate data communication with sensor node. To determine the above problem the system introduces the three-tier security framework for authentication and pair wise key establishment between mobile sinks and sensor nodes. The previous system used the polynomial key pre distribution scheme for the sensor networks which handles sink mobility and continuous data delivery to the neighbouring nodes and sinks, but this scheme makes high computational cost and reduces the life time of sensors. In order to overcome this problem a random pair wise key pre distribution scheme is suggested and further it helps to improve the network resilience. In addition to this an Identity Based Encryption is used to encrypt the data and Mutual authentication scheme is proposed for the identification and isolation of replicated mobile sink from the network.

**keywords: Wireless Sensor Network, Pair wise Key Establishment, Random Key Pre distribution, Mobile Sink, ID Encryption, Mutual Authentication Scheme.**

**AUTOMATED ANNOTATION WITH PATTERN ANALYSIS FOR WEB FACIAL IMAGES**

**Paper ID-1372**

**A paper presented by:Dr.P Gopi Krishna, Dr K Raghava Rao DILIPKUMAR NAGULAVANCHA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:** Today searching is the most widely used by the people. Among this searching most people are search for image and videos. Though there are no of search engines are available still there is a lot of limitations to show the text associated with images and video. Most of the results are irrelevant. Here face detection with relevant text is the most challenging factor. In this paper, the proposed system focus on automatic content based image retrieval with text and image annotation is implemented to retrieve the relevant images with text. This process will automatically assign the text to the relevant images in the searching process. Finally detection of human faces with relevant text is the main aim in this paper. Results will show the performance of the proposed work.

**Keywords:** Automatic Annotation, ACBIR, searching.

**BRAINWAVE TECHNOLOGY BASED DROWSINESS TRACKING DURING DISTRACTED  
DRIVING**

**Paper ID-1373**

**A paper presented by: Dr.R Bulli Babu, Dr.P Gopi Krishna, BASWANI KAVYA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

This project discussed about EEG-Based Drowsiness Tracking during Distracted Driving based on Brain computer interfaces (BCI). BCIs are systems that can bypass conventional channels of communication (i.e., muscles and thoughts) to provide direct communication and control between the human brain and physical devices by translating different patterns of brain activity into commands in real time. With these signals from brain in matlab signals spectrum analyzed and estimates driver concentration and meditation conditions.. If there is any nearest vehicles to this vehicle a voice alert given to driver for alert . and driver going to sleep gives voice alert for driver using voice chip. And give the information about traffic signal indication using RFID.

The patterns of interaction between these neurons are represented as thoughts and emotional states. According to the human thoughts, this pattern will be changing which in turn produce different electrical waves. A muscle contraction will also generate a unique electrical signal. All these electrical waves will be sensed by the brain wave sensor and it will convert the data into packets and transmit through Bluetooth medium. Level analyzer unit (LAU) will receive the brain wave raw data and it will extract and process the signal using Mat lab platform. The nearest vehicles information is information is taken through ultrasonic sensors and gives voice alert. And traffic signals condition is detected through RF technology.

**Key words: ARM, RF, BCI, ultrasonic sensor.**

**A MOBILE APPLICATION ON VOICE AND MESSAGE SENDING SERVICES USING WIRELESS  
NETWORKS**

**Paper ID-1374**

**A paper presented by:Dr.M Kameswara Rao, Dr.N V K Ramesh, PULI MAHESH KUMAR REDDY,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Be the performance of cabin environment and transform our flight into personalized travel experience. Cabin management system performs controlling on everything from features present in the developed environment specification. These features are developed traditionally using manual effort on each controlling device of the developed constitutions of graphic management and other system configurations. So automatic system required for control lighting, temperature, and other technical issues in updated development features present in the perspective data representation in technical processing units. Consider the features of high speed connectivity and streaming of documents in controlling the feasibilities of cabin applications effectively. Our experimental results show of graphic management system of the cabin controlling applications in recent application development of aero planes and air crofts and other flying machineries with relative temperature in environment specifications of all the above technical aspects.

**Index Terms:** Cabin Management Systems, cabin pressurization, Design and controlling systems

**CLICK BASED SEARCH AS YOU TYPE IN SPATIAL DATABASES**

**Paper ID-1375**

**A paper presented by: Sri.B.Naresh Kumar Reddy, Sri.N V K Ramesh, BODDULURI  
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Andhra Pradesh, India

**Abstract:**

Google search is one of the most used search engine in the internet. Currently searching is the main application in the internet. Based on the research many techniques and various algorithms have been proposed to search as type and searching based on keyword. There are many drawbacks have been identify in searching keyword. In this paper, a new technique have been introducing for searching as you type with click based, indexing and ranking is implemented for increasing the performance.

**Keywords: search-as-you-type, fuzzy search, first-N queries, weighted index-based technique**

**COMPUTING APPROXIMATIONS FOR DATASET WITH MAP REDUCING**

**Paper ID-1376**

**A paper presented by: Dr.T.Anuradha, Dr..D.Aruna Kumari, RUPA RADHIKA JAHNAVI SAGI,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Big data is the most widely used and fast growing in the IT field. In the data mining, data extraction is most widely increasing field. As the data increases it is very difficult to handle and process the data. Rough set theory which is most widely used technique to solve the many problems in pattern recognition, machine learning, and data mining. In order to obtain the results that rough sets can provide for data mining and related tasks, efficient computing these approximations is necessary. On the other side Map reducing is the technique to handle process of dataset efficiently by creating multiple work nodes and processing through those work nodes. In previous research, they proposed a Map Reduce-based method for computing approximations for only one dataset by using map reducing. To address this shortcoming, we introduce other module for including one or more datasets. All of these datasets are evaluated through Map Reduce. The proposed parallel methods are then experimentally shown to be efficient for processing large-scale data.

**Keywords: Multiple dataset, rough set, map reduce.**



**DATA VERIFICATION IN CLOUD BY USING ADVANCED IDENTITY TECHNIQUE**

**Paper ID-1377**

**A paper presented by:Dr..D.Aruna Kumari, Dr G Vijaya Kumar, GADDE LALITH KUMAR,**  
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**Abstract:**

Cloud computing is the fast growing domain in the current world. Data storage is main task in the cloud computing. Providing security for the data stored in the cloud database. Security is one of the most feature for the cloud computing. Every cloud service provider will attract the users by providing security for the cloud data. Various existing methods have been implemented based on data verification using identity technique. Many drawbacks identified in the existing methods. In this paper, new data verification in cloud by using advanced identity verification technique is implemented.

**Keywords: Data verification, cloud storage, identity technique.**

**DELAUNAY OVERLAYS FOR P2P STREAMING SERVICES**

**Paper ID-1378**

**A paper presented by:Dr..R Bulli Babu, RUPA RADHIKA JAHNAVI SAGI,**

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**Abstract:**

Visual and audio entertainment via cable, satellite systems are evolving to IPTV and P2PTV based systems. Commercial P2P streaming servers like Zattoo, Joost are some Content Delivery Networks (CDN) based on peer-to-peer architecture. When content is a static feed data delivery is better in broadcast based systems. But as the users volume for dynamic content soars up, internet scale search and data delivery beats any broadcast based systems. This is essentially the driving force behind P2P Streaming Services. P2P systems are usually classified as either tree-based push or mesh-based swarming and Zattoo happens to be a hybrid. Previously for performance improvement in Zattoo like systems receiver-based peer-division multiplexing engine involving repeater nodes to deliver live streaming content on a p2p network was developed. This hybrid approach happens to be a resource drain with performance and scalability issues. Such an implementation can only be handled by commercial systems like Zattoo. Considering medium and small scale streaming systems we propose to use P2PStreaming services governed by Delaunay Triangulation protocol. The paper presents an algorithm to build each peer with Delaunay links incrementally by including random peers returned from P2P network querying or accessing the same content. The algorithm is then optimized by considering the Euclidean distance between peers to speed up the overlay convergence thus improving content loading delays at same time supporting many other peers. A practical implementation of the proposed system validates our claim.

***Index Terms:* Delaunay triangulation, Cool Streaming, multicasting,random peers, P2P network querying,peer-to-peer technology.**

**Design & Analysis of Non Pneumatic (air less) Tyre Comparing with Pneumatic Tyre**

**Paper ID-1379**

**A paper presented by:Dr., Sri N.V.K.Ramesh,KIRANMAI NEELISETTY, ,**  
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Andhra Pradesh, India

**Abstract**

The Non Pneumatic Tyre (airless tire) is a single unit replacing the pneumatic tire, wheel and tire assembly. It replaces all the components of a typical radial tire and is comprised of a rigid hub, connected to a shear band by means of flexible, deformable honey comb spokes and a tread band, all functioning as a single unit. The Tweel, a kind of airless tire, though finds its generic application in military and earth moving applications due to its flat proof design can also render the pneumatic tire obsolete in domestic cars. My project involves design and analysis of an airless tire (NPT) for domestic cars; this will be followed by comparison of stresses and deformation between Pneumatic and non Pneumatic tires and also performance of non Pneumatic tires for different materials and justifying the better material among the materials chosen, based upon stress analysis. The tire is modeled in Pro E Wild fire 4.0 and analysis is conducted in Ansys Workbench 15.0.

**Digital Art Drawing in the Air through Camera**

**Paper ID-1380**

**A paper presented by: Sri.B.Naresh Kumar Reddy, VENKATA AVINASH KARRI,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Gesture Recognition is a technology which is used to identify human gestures with the help of mathematical algorithms. Gesture recognition recognizes the hand, tracks the hand movements & also provides information about hand position orientation and flux of the fingers. The colour markers are placed at the tip of the user fingers. This helps the webcam to identify the movement of hand and the gesture recognition. The drawing application allows the user you to draw on any surface by tracking the fingertip movements of the user's index finger. The pictures that are drawn by the user can be stored and replaced on any other surface. The user can also shuffle through various pictures and drawing by using the hand gesture movements.

**Keywords: Raspberry Pi, Python, openCV.**

**EFFECTIVE AND ADAPTABLE ADMINISTRATION OF THE INFORMATION FOLD IN THE  
CLOUD**

**Paper ID-1381**

**A paper presented by:Dr.R.Bulli Babu, ASHA KOWTHARAPU,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:** Despite recent advances in distributed RDF data management, processing large-amounts of RDF data in the cloud is still very challenging. In spite of its seemingly simple data model, RDF actually encodes rich and complex graphs mixing both instance and schema-level data. Shading such data using classical techniques or partitioning the graph using traditional min-cut algorithms leads to very inefficient distributed operations and to a high number of joins. In this paper, we describe DiploCloud, an efficient and scalable distributed RDF data management

**DISCOVERY OF RANKING FRAUD FOR MOBILE APPS**

**Paper ID-1382**

**A paper presented by: Smt..P.S.G.Aruna Sri, VALANDAS SAI SHASHANK,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

The Mobile App is famous among mobile devices as mobile users are increasing gradually. But due to increase of applications fault gross is the main problem to observe. Fault gross means susceptible ways by which increasing the in demand table. The importance and necessity of minimizing fault gross is well known. In the existing system the prominent event and prominent period of an app is identified from the collected historical records. We use three types of attestations which are retrieved from user. They are Gross attestation, survey attestation, audit attestation. By composing these three attestation methods proof can be formed. We are proposing two improvements. Firstly, we are using Approval of scores by the admin to analyze the exact audits and survey scores. Secondly, the fault assessment for increasing the popularity of the of the application in the top list is avoided. Two distinctive restraints are validated for verifying the assessment given to an application. The first constraint is that an app can be rated only once from a user login and the second is implemented with the aid of IP address that limits the user login logged per day. Finally, the planned system will be evaluated with real-world App data which is to be collected from the App Store for a long time period.

**Keywords: Mobile Apps, Gross Fraud Detection, Attestation Aggregation, Historical Gross Records, Survey and Audit.**

**DOUBLE ENCRYPTION SERVER IS AN OPEN KEY WITH THE WORD  
SEARCH FOR DISTRIBUTED STORAGE SECURITY**

**Paper ID-1383**

**A paper presented by: Sri P Vikram, KIRANMAI NEELISETTY,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Searchable encryption is of increasing interest for protecting the data privacy in secure searchable cloud storage. In this paper, we investigate the security of a well-known cryptographic primitive, namely, public key encryption with keyword search (PEKS) which is very useful in many applications of cloud storage. Unfortunately, it has been shown that the traditional PEKS framework suffers from an inherent insecurity called inside keyword guessing attack (KGA) launched by the malicious server. To address this security vulnerability, we propose a new PEKS framework named dual-server PEKS (DS-PEKS). As another main contribution, we define a new variant of the smooth projective hash functions (SPHF) referred to as linear and homomorphic SPHF (LH-SPHF). We then show a generic construction of secure DS-PEKS from LH-SPHF. To illustrate the feasibility of our new framework, we provide an efficient instantiation of the general framework from a Decision Diffie–Hellman-based LH-SPHF and show that it can achieve the strong security against inside the KGA.

**DATA INTEGRITY AND DELAY DIFFERENTIATED SERVICES WITH DYNAMIC  
ROUTING IN WIRELESS SENSOR NETWORKS**

**Paper ID-1384**

**A paper presented by:Dr K RaghavaRao, BANDI VAMSI MALLIKARJUNA REDDY,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

A wireless sensor network (WSN) is a wireless network that consisting of spatially distributed autonomous devices using sensors to cooperatively monitor physical or environmental conditions, such as temperature, sound, vibration, pressure, motion or pollutants, at different locations. In WSN, the QoS requirements are delay, reliability, and throughput. Applications running on the same Wireless Sensor Network (WSN) they have different Quality of Services (QoS) Requirements. Mainly two requirements are low differed (delay) and high data integrity. These two requirements can't be satisfy at the same time. the idea of potential in physical science, we propose IDDR, a multipath dynamic routing algorithm. By constructing a virtual hybrid potential field, IDDR separates packets of applications with different QoS requirements according to weight assigned to each packet, and routes them towards the sink through different paths to improve the data fidelity for integrity sensitive applications and reduce end-to-end delay for delay sensitive ones. Dynamic Routing mechanisms in the Internet have normally has based on shortest-path routing for best traffic effort. This causes traffic congestion, particularly if bottleneck joins on the shortest path surely restrict the effective bandwidth between the source and the destination. Dynamic routing means building up the routing efficient when source sent the root request that time follow the packet delivery ratio, IDDR protocol. WSNs, which are utilized to senses the physical elements in the area, will play an important role in the future networks.

**Keywords — Data Integrity, Delay Differentiated Services, Dynamic Routing, Wireless Sensor Networks, Data Honesty.**



**DYNAMIC SECURE CLOUD STORAGE WITH KEY ATTRIBUTE  
BASED ENCRYPTION**

**Paper ID-1385**

**A paper presented by:Dr.M Kameswara Rao,PULI MAHESH KUMAR REDDY,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract:** Cloud computing is nothing but internet. The services which are working with internet. There are many uses are there with cloud computing one of the promising use is storage of data and outsourcing of data which is easily access in cloud. Sharing of outsourced data is most widely used in cloud. Many users want to use the outsourced data from various places from different systems. But the problem user don't have the physical control over the outsourced data. Security should be provided to the data among the users. To use the data cloud will provide authentication to the users. One of the important task is privacy preserving, this should not be reveal to all the users. To share the data securely cryptography helps the data owner to share the data to in safe way. So user encrypts data and uploads on server. Different encryption and decryption keys are generated for different data. The encryption and decryption keys may be different for different set of data. Only those set of decryption keys are shared that the selected data can be decrypted. Here a public-key cryptosystems which generate a ciphertext which is of constant size. So that to transfer the decryption rules for number of ciphertext. The difference is one can collect a set of secret keys and make them as small size as a single key with holding the same ability of all the keys that are formed in a group. This compact aggregate key can be efficiently sent to others or to be stored in a smart card with little secure storage.

**Index Terms:** Cloud Storage, Attribute Base Encryption, Identity Base Encryption, Cloud Storage, Data Sharing, Key aggregate Encryption.

**EFFICIENT DATA EMBEDDING BY USING JPEG STEGANOGRAPHY**

**Paper ID-1386**

**A paper presented by:Dr N V K Ramesh, BANDLA NAGA MALLESWARI,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

We propose a replacement reversible watermarking theme. One 1st contributions may be a bar chart shifting modulation that adaptively takes care of the native specificities of the image content. By Applying it to the image prediction-errors and by considering their immediate neighborhood, the theme we tend to propose inserts information in rough-textured areas. This classification is predicated on a reference image derived from the image itself, a prediction of it that has the property of being invariant to the watermark insertion. Our technique will insert a lot of information with lower distortion than any existing schemes.

**Keywords: Image Encryption, Image Recovery, Reversible Data Hiding.**

**EFFICIENT WEB PAGE RECOMMENDATION MINING PROCESS FOR CONTENT  
AND SEMANTIC APPROACHES**

**Paper ID-1387**

**A paper presented by:Dr.K Raghava Rao Sri, SINGAMNENI VISHNU SRAVYA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:** Recommendation systems will make use of linguistics reasoning-capabilities to beat common limitations of current systems and improve the recommendation's quality. In this paper, a personalized-recommendation system is proposed that creates use of representations of things and user-profiles supported ontologies so as to produce linguistics applications with customized services. The recommender uses domain ontology to reinforce the personalization. On the one hand, user's interest area unit modelled in an exceedingly simpler and correct manner by applying a domain-based logical thinking method. On the opposite hand, the stemmer algorithmic program utilized by our content-based filtering approach, that provides a live of the affinity between an item and a user, is increased by applying a grammar similarity technique. Web Usage Mining plays a very important role in recommender systems and net personalization. In this paper, it is proposed to have efficient recommendation system supported metaphysics and net Usage Mining. The primary step of the approach is extracting options from net documents and constructing relevant ideas. Then build metaphysics for the net web site use the ideas and vital terms extracted from documents. In keeping with the linguistics similarity of net documents to cluster them into completely different linguistics themes, imply different preferences.

The planned approach integrates linguistics data into net Usage Mining and Personalization processes. Once users submit one in each of the queries, the computer Program will come back the results that are categorized into totally different teams in keeping with user search goals on-line.

**Keywords:** WUM (Web Usage Mining), ontology.

**EMPOWER DISTRIBUTED STORAGE EVALUATING WITH APPROVAL OUTSOURCING REAL  
UPDATES**

**Paper ID-1388**

**A paper presented by:Dr G Vijaya Kumar Sri, JENNY MARTHA CHATLA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract-**

Key-exposure resistance is an important problem in cyber defense. In the cloud storage auditing the key exposure problem was well analyzed and studied. In the existing solution the client will be updating the secret keys in every period of time so it is very difficult for the client particularly those who are in limited computation resources. In the paper, we focus on how key updates are transparent to the client and propose a new concept called cloud storage auditing with verifiable outsourcing of key updates. Key updates can be safely outsourced to some authorized party and thus the key update work burden to the client will be reduced. In this we leverage the third party auditor in many existing public auditing designs, The role of authorized party and make it in charge of both the storage auditing and the secure key updates for key-exposure resistance. In this design, TPA only needs to hold an encrypted version of the client's secret key while doing all these burdensome tasks on behalf of the client. The client only needs to download the encrypted secret key from the TPA when uploading new files to cloud. Besides, our design also equips the client with capability to further verify the validity of the encrypted secret keys provided by the TPA. All these salient features are carefully designed to make the whole auditing procedure with key exposure resistance as transparent as possible for the client. The security proof and the performance simulation show that this detailed design instantiations are secure and efficient.

**ENSURING DATA INTEGRITY IN REGENERATING-CODING-BASED CLOUD  
STORAGE**

**Paper ID-1389**

**A paper presented by:Dr.G Vijaya Kumar, THIRUNAVALLI VENKATA RANGA SAI,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Cloud servers can also reveal secrets based on the amount of time they take to do certain computations. To protect outsourced data in cloud storage against corruptions, adding fault tolerance to cloud storage, along with efficient data integrity checking and recovery procedures, becomes critical. Regenerating codes provide fault tolerance by striping data across multiple servers, while using less repair traffic than traditional erasure codes during failure recovery. Therefore, we study the problem of remotely checking the integrity of regenerating-coded data against corruptions under a real-life cloud storage setting. We design and implement a practical data integrity protection (DIP) scheme for a specific regenerating code, while preserving its intrinsic properties of fault tolerance and repair-traffic saving. Our DIP scheme is designed under a mobile Byzantine adversarial model, and enables a client to feasibly verify the integrity of random subsets of outsourced data against general or malicious corruptions. It works under the simple assumption of thin-cloud storage and allows different parameters to be fine-tuned for a performance-security trade-off. We implement and evaluate the overhead of our DIP scheme in a real cloud storage tested under different parameter choices. We further analyze the security strengths of our DIP scheme via mathematical models. We demonstrate that remote integrity checking can be feasibly integrated into regenerating codes in practical deployment.

**Keywords —Remote data checking secure and trusted storage systems, implementation, and experimentation.**

**ENHANCED ACCESS CONTROL OF THIRD PARTY DATA IN CLOUD COMPUTING**

**Paper ID-1390**

**A paper presented by: Sri.B.Naresh Kumar Reddy, VENKATA AVINASH KARRI,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Cloud computing is the fast growing technology in the current world. Providing services to all types of users with quality is done in cloud computing. Infrastructure is one of the emerging computing paradigm in cloud computing. Providing trusted storage and server maintenance etc is done in cloud computing. Storing sensitive data using cryptographic techniques are the existing methodologies such as encryption and decryption. In this paper, the new security is used to secure the sensitive data in the cloud storage. AHASBE is the additional feature to the cloud storage for security of cloud data. This uses the enhanced cipher text policy by encrypt and decrypt the data in cloud, this will provide more flexible to use the secure data.

**Keywords: un-trusted servers, data owner, key distribution, cipher text, data consumer.**

**ENHANCED APPROACH FOR DATA OFFLOADING IN CELLULAR NETWORKS**

**Paper ID-1391**

**A paper presented by:Dr..D.Aruna Kumari, GADDE LALITH KUMAR,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Traffic plays a major role in cellular networks. It is one of the sever traffic problem which overloads the network and create problem to the network. This paper tries to offload the cellular network traffic through Opportunistic Communications and Social Participation formed by the short-range communication technologies in the smart phones (e.g., Wi-Fi, Bluetooth). We design an Enhanced Greedy algorithm for target set selection Problem. Our design enables to select the most active, fixed located and having more energy mobile nodes into the Target- set, which affect the more number of infected users. Our simulation results show that number of node covered by Enhanced Greedy algorithm is 89% and Greedy algorithm is 76%. We are able to achieve the rate of success information delivery over the networks in Enhanced Greedy and Greedy algorithms are 71% and 53% respectively.

**Keywords— Mobile data offloading, target-set selection, opportunistic communications, mobile social networks, cellular traffic offloading, Non-target set, Cellular networks.**

**ENHANCED C-MEANS CLUSTERING WITH PCA FOR MEDICAL DATASET**

**Paper ID-1392**

**A paper presented by: Dr.G Vijaya Kumar , RISHI KORRAPOLU,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Every day huge number of data is collected from many sources and many types of data is generated. To analyse the data from various sources several clustering techniques have been implemented. To handle the huge data like medical data and bpl families and many other datasets. In this paper, the advanced clustering technique have been implemented to assign patients to the different clusters of diseases. The results are compared with the results of hard k-means clustering according to classification performance. In Addition to this c-means clustering we are using, Principal component analysis (PCA) is a widely used statistical technique for unsupervised dimension reduction.

**Key Words:- k-means clustering, Fuzzy c-means clustering. Enhanced Multi-keyword**



**QUERY ROUTING IN RDBMS**

**Paper ID-1393**

**A paper presented by:Dr.M D Ali Hussain, Dr.R Bulli Babu, CHIGURU NISHANTH,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Searching is the important task in web world. String search is one of the important task in the RDBMS. Two databases are there such as text databases and relational databases. These databases search the user documents according to the user. Arranging the data in the form of Rows and columns and based on the constraints. In this paper, multi- keyword query routing for the effective searching of data like documents and text in RDBMS.

**Keywords: Keyword search, keyword query, keyword query routing, graph-structured data.**

**ENSEMBLE REVERSE SPATIAL KEYWORD SEARCH**

**Paper ID-1394**

**A paper presented by: Smt. P.S.G. Aruna Smt, NIBHANUPUDI SRI NIDHI,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Query is the most useful request to get the data from many sources. Spatio-textual queries retrieve the most similar places based on the query. Many users want the Spatio-textual results accurately. Various existing systems work on this and can't reach their mark to get the better output. In this paper, a novel ranking query is implemented to get the better results compared with existing systems. To improve the performance of the proposed spatio-textual we adopted kcr-tree to maintain the upper bound and lower bound results.

**Keywords: Spatial-textual, reverse keyword, kcr-tree.**

**A WELL-ORGANIZED REVOCABLE DATA ACCESS CONTROL FOR MULTI-AUTHORITY  
CLOUD STORAGE**

**Paper ID-1395**

**A paper presented by: Dr.M Kameswara Rao , BOMMA REDDY AKHIL REDDY,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Ensuring data security while accessing data in the cloud is a paramount importance. Due to data outsourcing and untrusted cloud servers, the data access control becomes a challenging issue in cloud storage systems. Ciphertext-Policy Attribute-based Encryption (CP-ABE) is regarded as one of the most suitable technologies for data access control in cloud storage, because it gives data owners more direct control on access policies. However, it is difficult to directly apply existing CP-ABE schemes to data access control for cloud storage systems because of the attribute revocation problem. In this paper, we design an expressive, efficient and revocable data access control scheme for multi-authority cloud storage systems, where there are multiple authorities co-exist and each authority is able to issue attributes independently. Specifically, we propose a revocable multi-authority CP-ABE scheme, and apply it as the underlying techniques to design the data access control scheme. Our attribute revocation method can efficiently achieve both forward security and backward security. The analysis and simulation results show that our proposed data access control scheme is secure in the random oracle model and is more efficient than previous works.

**Keywords — Access control, multi-authority, CP-ABE, attribute revocation, cloud storage**

**EXTRACT TEXT FROM IMAGE USING ANDROID APPLICATION**

**Paper ID-1396**

**A paper presented by:Dr..K Raghava Rao , MADALA SIDDHENDRA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

The main theme of Image Text To Speech mobile application is to provide an android application to the users that act as text extractor as well as speech, share text too. This android application basic functionality is extracting the text from captured and selected image on mobile. The application has capability to copy and share the extracted text via online or sms. This application also has capable to speech the extracted text through android text to speech feature. This helps the user (If student) copy the text from image (If impaired) listen text.

**A NEW SECURITY APPROACH FOR AUDITING IN DE-DUPLICATION SYSTEM IN CLOUD**

**Paper ID-1397**

**A paper presented by:Dr.G Vijaya Kumar, PEPAKAYALA LASHITHA VISHNU PRIYA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

cloud computing is one of the biggest innovative technology and it provides the facility of heavy data maintenance and management by improving data sharing and data storing capabilities. To create data management more scalable in cloud computing field, deduplication a well-known method of data compression to reduce duplicate copies of duplicate data in storage over a cloud. Even if data deduplication brings a lot of advantages in security and privacy concern occur as users' confidential data are liable to both attacks insider and outsider. A convergent encryption method imposes data privacy while making deduplication possible. Traditional deduplication systems based on convergent encryption even though offer confidentiality but do not maintain the duplicate check on basis of differential rights. This paper present, the plan of approved data deduplication planned to guard data security by counting discrepancy privileges of users in the duplicate check. Deduplication systems, users with differential privileges are added measured in duplicate check besides the data itself. To maintain stronger security the files are encrypted with differential privilege keys. Users are only permitted to carry out the copy check for files marked with the matching privileges to access. The user can confirm their occurrence of file after deduplication in cloud with the help of a third party auditor by auditing the data. Additional auditor audits and confirms the uploaded file on time. we present two secure systems, namely SecCloud and SecCloud+. SecCloud introduces an auditing entity with a maintenance of a MapReduce cloud, which helps clients create data tags before uploading as well as audit the integrity of data having been saved in cloud. Compared with previous work, the computation by user in SecCloud is greatly reduced during the file uploading and auditing phases. SecCloud+ is designed motivated by the fact that customers always want to encrypt their data before uploading, and enables integrity auditing and secure deduplication on encrypted data.

**Keywords —Data deduplicating, Secure auditing, SecCloud and SecCloud+, Cloud Storage.**

**MAINTAINING MESSAGE INTEGRITY IN HOP-BY-HOP WIRELESS SENSOR NETWORKS  
WITH SOURCE PRIVACY**

**Paper ID-1398**

**A paper presented by: Dr K V Daya Sagar, MULPURI BINDU PRATHYUSHA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Message Integrity is one of the most effective ways to thwart unauthorized and corrupted messages from being forwarded in wireless sensor networks (WSNs). In wireless sensor networks many message authentication schemes have been developed, based on either symmetric-key cryptosystems or public-key cryptosystems. For this reason, Most of them, however, have the limitations of high computational and communication overhead in addition to lack of scalability and resilience to node compromise attacks. To address these issues, a Polynomial-based scheme was recently introduced. However, this scheme and its extensions all have the weakness of a built-in Threshold determined by the degree of the polynomial: when the number of messages transmitted is larger than this threshold, the Adversary can fully recover the polynomial. In this paper, we propose a scalable authentication scheme based on elliptic curve Cryptography (ECC). While enabling intermediate nodes authentication, our proposed scheme allows any node to transmit an unlimited number of messages without suffering the threshold problem. In addition, our scheme can also provide message source privacy. Both theoretical analysis and simulation results demonstrate that our proposed scheme is more efficient than the polynomial-based approach in terms of computational and communication overhead under comparable security levels while providing message source privacy.

**Keywords — Hop-by-hop authentication, symmetric-key cryptosystem, public-key cryptosystem, source privacy, simulation, wireless sensor networks (WSNs), distributed algorithm, decentralized control**

**IMPACT OF VIEW HISTORIES ON EDIT RECOMMENDATIONS**

**Paper ID-1399**

**A paper presented by: Smt..P.S.G.Aruna Sri Dr N V K Ramesh, SATYA VASAVI S,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract:**

Recommendation systems are intended to increase developer productivity by recommending files to edit. These systems mine association rules in software revision histories. However, mining coarse grained rules using only edit histories produces recommendations with low accuracy, and can only produce recommendations after a developer edits a file. In this work, we explore the use of finer grained association rules, based on the insight that view histories help characterize the contexts of files to edit. To leverage this additional context and fine grained association rules, we have developed *MI*, a recommendation system extending *ROSE*, an existing edit based recommendation system. We then conducted a comparative simulation of *ROSE* and *MI* using the interaction histories stored in the Eclipse Bugzilla system. The simulation demonstrates that *MI* predicts the files to edit with significantly higher recommendation accuracy than *ROSE* (about 63% over 35%), and makes recommendations earlier, often before developers begin editing. Our results clearly demonstrate the value of considering both views and edits in systems to recommend files to edit, and results in more accurate, earlier, and more flexible recommendations.

**Index Terms:** Programming environments/construction tools, interactive environments, software maintenance, data mining, association rules, programmer interaction histories.

**IMPROVED ADAPTIVE NOTCH FILTER FOR GRID TIED SOLAR PV SYSTEM USING ANN  
CONTROLLER**

**Paper ID-1400**

**A paper presented by:Dr.P Vikram, Dr.M Kameswara rao Sri, PALLE JITIN,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

This paper presents an Improved Adaptive Notch Filter (ANF) for grid tied solar PV system with Ann control algorithm. A combination of ANF with ANN control algorithm has proposed to improve the %THD in the grid currents. Generally the PI controller will not has much effect on %THD, but the ANN controller has more effect and will reduce the %THD. The ANF controller successfully generates sinusoid of a possibly non-stationary nature from harmonics degraded load currents at PCC. The presented Solar PV system with ANF, is a multi-functional grid-connected SPV energy conversion system. The conversion of dc-power to AC, will act as harmonics current elimination, reactive power compensation and load balancing. And also this multifunction grid connected SPV system is capable to save significantly money investment, space and maintenance cost. Combination of ANF with ANN control algorithm provides instantaneous values of the original signals. MATLAB/SIMULINK software is used for simulation results to verify the strength of the presented algorithm. The %THD of grid currents is well under IEEE-519 standard even for the nonlinear loads also.

**Index Terms**— Solar photovoltaic, ANN, harmonics elimination, MPPT, reactive power compensation and load balancing.



**IMPROVED BACK PROPAGATION ALGORITHMS FOR RAPID DEVELOPMENT OF NEURAL NETWORKS**

**Paper ID-1401**

**A paper presented by: Dr.K.Raghavarao, B NAGA BHAVYA,**

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Andhra Pradesh, India

**Abstract**

The class of Artificial Neural Network (ANN) is Radial Basis Function Network (RBFN) is implemented in various clustering and classification of engineering research. Improved Backpropagation (ABP) algorithm is a learning algorithm that was widely used in ANN. However, BP has major disadvantages of slow error rate convergence and always easily stuck to the local minima. Hence, Modified BP algorithm was proposed in this study to improve the learning speed of RBFN using discredited data. Java programming language was used to develop the program for the proposed method. This paper shows how the backpropagation algorithm works and features of the algorithm, role in neural networks are discussed.

**Keywords: Modified back propagation, cost function, discretization, radial basis function network.**

**INTERNET HARASSING LOCATION IN VIEW OF REINFORCED GOOD MINIMIZATION OF  
DENYING AUTO-ENCODER**

**Paper ID-1402**

**A paper presented by: Sri.B.Naresh Kumar Reddy, Sri.K Raghava Rao, BALA AKHIL REDDY  
THIRUMALAREDDY,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

As a side effect of increasingly popular social media, cyberbullying has emerged as a serious problem afflicting children, adolescents and young adults. Machine learning techniques make automatic detection of bullying messages in social media possible, and this could help to construct a healthy and safe social media environment. In this meaningful research area, one critical issue is robust and discriminative numerical representation learning of text messages. In this paper, we propose a new representation learning method to tackle this problem. Our method named Semantic-Enhanced Marginalized Denoising Auto-Encoder (smSDA) is developed via semantic extension of the popular deep learning model stacked denoising autoencoder. The semantic extension consists of semantic dropout noise and sparsity constraints, where the semantic dropout noise is designed based on domain knowledge and the word embedding technique. Our proposed method is able to exploit the hidden feature structure of bullying information and learn a robust and discriminative representation of text. Comprehensive experiments on two public cyberbullying corpora (Twitter and MySpace) are conducted, and the results show that our proposed approaches outperform other baseline text representation learning methods.

**INVARIANT SHAPE RETRIEVAL BY COMPUTER VISION: SHAPE GOOGLE**

**Paper ID-1403**

**A paper presented by: Sri.P.Gopi Krishna, KOKKURA VEENA SAHITHI,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

At Present scenario Feature-metric methods have gained popularity in computer vision and pattern recognition communities, in applications such as object recognition and image retrieval. In this paper, we explore analogous approaches in the 3D world applied to the problem of non-rigid shape search and retrieval in large databases.

**USING PIOGLITAZONE AS A MODEL DRUG AND WITH ISOLATION, EVOLUTION OF  
FENUGREEK MUCILAGE AS IN THE TABLET Dosage**

**Paper ID-1404**

**A paper presented by:Dr.M.Kameswara Rao, ASHA KOWTHARAPU,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract**

The aim of the current research work was to isolate and evaluate Fenugreek mucilage (FGM) and to develop and evaluate Pioglitazone tablets using FGM and Polyvinylpyrrolidone (PVP) K30, in varying concentrations of FGM. Tablets of Pioglitazone containing 15mg drug were prepared by non-aqueous wet granulation technique. Compatibility study was carried out by using FTIR and confirmed that no chemical interaction took place during entrapment process. Pre-compressional parameters and post-compression parameters were evaluated and the results were within the acceptable official limits. *In-vitro* drug release rate was carried out by USP dissolution rate apparatus type-II using 2 different dissolution media (0.1N HCL and Phosphate buffer of pH 7.4) and data was subjected to various kinetic models. *In-vitro* drug release shows concentration of Fenugreek increases then drug release decreases. The release data was fitted to various mathematical models to evaluate the kinetics of drug release. The drug release follows first order kinetics and mechanism was found to be non-Fickian diffusion. The Stability studies were carried out for 2 months. Cytotoxic effect of the formulations was evaluated by MTT assay and *In-vitro* anti-diabetic effect was studied using the glucose uptake model in rodent skeletal muscle cells (L-6) involved in glucose utilization, results exhibited moderate anti-diabetic activity and merits further investigation in animal models. In conclusion the results suggest that the formulated delayed release tablets of Pioglitazone could therapeutically better than conventional dosage form, leading to improved efficacy and better patient compliance.

**Keywords:Delayed release tablets, Pioglitazone, Fenugreek, Non-aqueous wet granulation,Cytotoxicity, *In-vitro* anti-diabetic effect.**

**USING PIOGLITAZONE AS A MODEL DRUG AND WITH ISOLATION, EVOLUTION OF  
FENUGREEK MUCILAGE AS IN THE TABLET DOSAGE**

**Paper ID-1405**

**A paper presented by: Dr. N V K Ramesh, Dr. T Anuradha MYSORE VAMSI KRISHNA,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

The aim of the current research work was to isolate and evaluate Fenugreek mucilage (FGM) and to develop and evaluate Pioglitazone tablets using FGM and Polyvinylpyrrolidone (PVP) K30, in varying concentrations of FGM. Tablets of Pioglitazone containing 15mg drug were prepared by non-aqueous wet granulation technique. Compatibility study was carried out by using FTIR and confirmed that no chemical interaction took place during entrapment process. Pre-compressional parameters and post-compression parameters were evaluated and the results were within the acceptable official limits. *In-vitro* drug release rate was carried out by USP dissolution rate apparatus type-II using 2 different dissolution media (0.1N HCL and Phosphate buffer of pH 7.4) and data was subjected to various kinetic models. *In-vitro* drug release shows concentration of Fenugreek increases then drug release decreases. The release data was fitted to various mathematical models to evaluate the kinetics of drug release. The drug release follows first order kinetics and mechanism was found to be non-Fickian diffusion. The Stability studies were carried out for 2 months. Cytotoxic effect of the formulations was evaluated by MTT assay and *In-vitro* anti-diabetic effect was studied using the glucose uptake model in rodent skeletal muscle cells (L-6) involved in glucose utilization, results exhibited moderate anti-diabetic activity and merits further investigation in animal models. In conclusion the results suggest that the formulated delayed release tablets of Pioglitazone could therapeutically better than conventional dosage form, leading to improved efficacy and better patient compliance.

**Keywords: Delayed release tablets, Pioglitazone, Fenugreek, Non-aqueous wet granulation, Cytotoxicity, *In-vitro* anti-diabetic effect.**

**FLEXIBLE DATA SHARING SYSTEM USING KEY AGGREGATION FOR CLOUD STORAGE**

**Paper ID-1406**

**A paper presented by: Dr R Bulli Babu , VAMSI KRISHNA KOPPOLU,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Data sharing is an essential functionality in cloud storage. In this paper, we show how to efficiently, securely and flexibly share data with others in cloud storage. We describe new public-key cryptosystems that produce constant-size ciphertexts such that efficient delegation of decryption rights for any set of ciphertexts is possible. The novelty is that one can aggregate any set of secret keys and make them as compact as a single key, but encompassing the power of all the keys being aggregated. In other words, the secret key holder can release a constant-size aggregate key for flexible choices of ciphertext set in cloud storage, but the other encrypted files outside the set remain confidential. This compact aggregate key can be conveniently sent to others or be stored in a smart card with very limited secure storage. We provide formal security analysis of our schemes in the standard model. We also describe other application of our schemes. In particular, our schemes give the first public-key patient-controlled encryption for flexible hierarchy, which was yet to be known.

**Keywords — Cloud storage, data sharing, key-aggregate encryption, patient-controlled encryption**

**A "PERFORMANCE ANALYSIS OF HARMONY SEARCH OPTIMIZATION" IN K-MEANS  
CLUSTERING**

**Paper ID-1407**

**A paper presented by: Sri P Vikram , AFROSE ROOHI,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

clustering is the most widely used technique in data mining. It is defined as collection of similar data at one place. Based on the similarity measures of data the clustering will formed. Various researches have been done on the data mining clustering on different types of data. K-means clustering is the most widely used algorithm to form the cluster data with centroid. Due to the late computation process the K-means algorithm does not form the best clustering data with accurate centroid. In this paper, an enhanced algorithm called Harmony Search Optimization is implemented for the clustering of data. To improve the performance of proposed algorithm we adopted some features of K-means into the proposed algorithm. In Addition to this proposed clustering we are using, Principal component analysis (PCA) is a widely used statistical technique for unsupervised dimension reduction. This will improve the performance of proposed algorithm.

**Keywords: K-Means, clustering, harmony search.**

**Mobile-Access of Health Data supported by Cloud with Attribute-based Encryption and  
AUDITABILITY**

**Paper ID-1408**

**A paper presented by: Sri.M Kameswara Rao, , KANAPARTHI ARAVIND,**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract**

Privacy issues like restricting the adoption of electronic healthcare systems and the wild success of cloud service models motivated us to build privacy into mobile healthcare systems with the help of the private cloud. Our system offers salient features including efficient key management, privacy-preserving data storage, and retrieval, especially for retrieval at emergencies, and auditability for misusing health data. Specifically, we propose to integrate key management from pseudorandom number generator for unlinkability, a secure indexing method for privacy preserving keyword search which hides both search and access patterns based on redundancy, and integrate the concept of attribute-based encryption with threshold signing for providing role-based access control with auditability to prevent potential misbehavior, in both normal and emergency cases.

**Keywords — Access control, auditability, eHealth, privacy.**



**DIGITAL VIDEO WATERMARKING TECHNOLOGY THROUGH IMAGE ADAPTIVE DATA  
CONCEALMENT FOR SECURITY SYSTEM**

**Paper ID-1409**

**A paper presented by: Dr.K.Kiran Kumar, SHAIK HAARIS,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

The Project presents an effective, robust and imperceptible video invisible watermarking scheme. This scheme embeds the watermark into any of frame from video. Here the blue channel of frame will be selected for watermarking based on Discrete Wavelet transformation and Singular Value Decomposition. The singular values of different sub band coefficients of Blue channel are modified using one least factor to embed the singular values of the watermark. SVD based watermark protects the secret image from distortion factors like rotation and shifting. The watermark will be extracted from video for recognition with user's watermark using co-occurrence features and Euclidean distance to access the copy righted video.

**MULTI-HOP CLUSTER HYBRID DESIGN FOR VANET SAFETY MESSAGE DISSEMINATION**

**Paper ID-1410**

**A paper presented by:Dr.M D Ali Hussain, THOTAKURA SAINAG,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:** Several conveyances impromptu Network (VANET) studies have targeted on the communication ways supported IEEE 802.11p, that forms the standard for Wireless Access for conveyance Environments (WAVE). at intervals the networks exploitation IEEE 802.11p only, the printed storm and disconnected network problems at high and low vehicle densities severally degrade the delay and delivery relation of safety message dissemination. Recently, as associate alternate to the IEEE 802.11p based VANET, the usage of cellular technologies has been investigated as a results of their low latency and good selection communication. However, a pure cellular based VANET communication is not potential as a results of the high value of communication between the vehicles and so the bottom stations, and high form of hand-off occurrences at very cheap station considering the top quality of the vehicles. This paper proposes a hybrid style, specifically VMaSC-LTE, combining IEEE 802.11p based multi-hop bunch and so the fourth generation cellular system, long haul Evolution (LTE), with the goal of achieving high data packet delivery relation and low delay whereas keeping the usage of the cellular style at minimum level. In VMaSC-LTE, vehicles ar clustered supported a totally distinctive approach named VMaSC: conveyance Multi-hop rule for Stable bunch. the {choices} of VMaSCar cluster head choice practice the relative quality metric calculated as a result of the common relative speed with connectedness the neighboring vehicles, cluster relevancy minimum overhead by introducing direct affiliation to the neighbor that is already a head or member of a cluster instead of connecting to the cluster head in multiple hops, disseminative cluster member information within periodic salutation packets, reactive cluster to require care of cluster structure whereas not excessive consumption of network resources, and economical size and hop restricted cluster merging mechanism supported the exchange of the cluster information among the cluster heads. These choices decrease the number of cluster heads whereas increasing their stability thus minimize the usage of the cellular style. From the clustered topology, elective cluster heads operate as dual-interface nodes with the utility of IEEE 802.11p and LTE interface to link VANET to LTE network. victimization varied key metrics of interest along with info packet delivery relation, delay, management overhead and cluster stability, we've an inclination to demonstrate superior performance of the projected style compared to every previously projected hybrid architectures and varied routing mechanisms along with flooding and cluster based routing via intensive simulations in ns-3 with the vehicle quality input from the Simulation of Urban quality (SUMO). The projected style jointly permits achieving higher required reliableness of the appliance quantified by the data packet delivery relation at the worth of higher LTE usage measured by the amount of cluster heads at intervals the network.

**Index Terms**—vehicular ad hoc networks, clustering, IEEE 802.11p, LTE, safety application, message dissemination

**A NOVEL APPROACH TO CONTROL MULTIPARTY ACCESS FOR ONLINE SOCIAL  
NETWORKS**

**Paper ID-1411**

**A paper presented by:Dr.G Vijaya Kumar, Dr K Pratap , DALIPARTHI VENKATA BALA SAI  
KRISHNA KASYAP,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Social Media has become phenomenon all over the world.Social media is the social interaction among people in which they create, share or exchange information and ideas in virtual communities and networks. These OSNs offer attractive means for digital social interactions and information sharing, but also raise a number of security and privacy issues. While OSNs allow users to restrict access to shared data, they currently do not provide any mechanism to enforce privacy concerns over data associated with multiple users. To this end, we propose an approach to enable the protection of shared data associated with multiple users in OSNs. We originate an access control paradigm to capture the essence of multiparty authorization requirements, along with a multiparty policy specification scheme and a policy enforcement mechanism. Besides, we present a logical representation of our access control model that allows us to leverage the features of existing logic solvers to perform various analysis tasks on our model. We also discuss a proof-of-concept prototype of our approach as part of an application in Facebook and provide usability study and system evaluation of our method.

**Keywords— Social network, multiparty access control, security model, policy specification and management.**

**IMAGE VISIBILITY RESTORATION ALGORITHM FOR REAL-WORLD HAZY SCENES**

**Paper ID-1412**

**A paper presented by:Dr.M Kamesawara Rao, DAGGUMATI VENKATA RAM REDDY,**  
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Andhra Pradesh, India

**Abstract:** The hazy removal technique divided into three categories such additional information approaches, multiple image approaches, single-image approaches. The first two methods are expensive and high computational complexity. Recently single image approach is used for this de-hazing process because of its flexibility and low cost. The dark channel prior is to estimate scene depth in a single image and it is estimated through get at least one color channel with very low intensity value regard to the patches of an image. The transmission map will be estimated through atmospheric light estimation. The median filter and adaptive gamma correction are used for enhancing transmission to avoid halo effect problem. Then visibility restoration module utilizes average color difference values and enhanced transmission to restore an image with better quality.

**Keywords:** - Hazy Image, Contrast Stretching, Bi-orthogonal Wavelet Transform, Depth Estimation, Adaptive Gamma Correction, Color Analysis, Visibility Restoration.

**DEVELOPMENT OF NANO PARTICLES WITH THERMAL INTERFACE MATERIALS (TIM) TO  
PREVENT PARTICLE Agglomeration**

**Paper ID-1413**

**A paper presented by:Dr..P Gopi Krishna, Dr M Kameswara Rao MEKA SRI KRISHNA  
CHAITANYA,**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Nanoparticles, small scale particles, low softening point (LMP) fillers, and blends of nano-smaller scale particles were joined to acquire both diminished interparticle warm resistance and diminished mass warm resistance in warm glues. An assessment of warm oil filler materials was additionally led. A relentless state conductivity test was utilized to quantify conductivity. Warm impedances of materials were measured at different altered bondline thicknesses running from 170 to 53 mm<sup>2</sup> K/W. The paper additionally exhibits a nanoparticle scattering way to deal with plan temperature and time stable nanogels. A few nanogels were assessed following three years post-readiness, utilizing transmission electron microscopy (TEM), to check molecule conveyance in the nanogel.

**keywords: Air-bearing surface (ABS), head-disk interface (HDI), heat-assisted magnetic recording (HAMR), media hot-spot.**

**ESTIMATING PORTING WEB API TO NEWER VERSION**

**Paper ID-1414**

**paper presented by: Sri P Vikram, Dr N V K Ramesh , NALAJALA KRISHNA MANOGNA,**  
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Andhra Pradesh, India

**Abstract**

Organization Oriented Architecture that is Service arranged architecture (SOA) is direct in respect to the applications that are developing today. Therefore, SOA has balanced deliberately. Programming specialists are using curated web organizations, got to by all that much portrayed interfaces like Application Programmable Interface (API) which are considered as essential part in their applications.

These APIs are considered as the key modules, however these are getting the opportunity to be difficult to the architects to differentiate the APIs comparability and with turn out with a completion of the work weight associated with "Porting" applications to use particular or new APIs. In total there are four different techniques we used they are

**NOVEL TECHNIQUE FOR TOLL GATE MANAGEMENT FOR SMART CITIES USING RFID**

**Paper ID-1415**

**A paper presented by: Sri K.Ravi kumar Dr.G.Vijaya Kumar**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

It is an Automatic Toll door System utilizing Raspberry Pi 3 is utilized for gathering charge consequently. In this we do the ID with the assistance of radio recurrence. A vehicle will hold a RFID tag. This tag is only one of a kind ID number appointed. This will be appointed by RTO or movement overseeing specialist. As per this number we will store, all essential data and also the sum he has paid ahead of time for the TOLL gathering. Per user will be deliberately passed at toll accumulation focus. At whatever points the vehicle passes the toll stall, the assessment sum will be deducted from his prepaid adjust. New adjust will be refreshed. On the off chance that in the event that one has inadequate adjust, he should keep up with least adjust. As vehicles don't need to stop in a line, this means lessened Traffic clog at toll squares and aides in lower fuel utilization. This is vital favorable position of this framework. RF based zone status transmitter unit and receiver unit. Once the information is received from the zones, the vehicle's embedded unit automatically alerts the driver, to reduce the speed according to the zone

**Keywords:** Raspberry pi, RF, way2sms

**PERFORMANCE ANALYSIS OF LINE AND CHARACTER SEGMENTATION FOR DIFFERENT  
LANGUAGE TEXT IMAGES**

**Paper ID-1416**

**A paper presented by:Sri.M. Venkateswara raoDr.M.Kameswara Rao**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Segmentation plays a major role in image processing. It can partition the entire image into homogeneous blocks. Different algorithms are used for segmentation process. Here we are using Projection Profile algorithm for segmentation of text documented images. Projection of an image gives graphical representation of sum of number of black pixels in an documented text image. In this we made a comparative study for time consumption and accuracy for line and character segmentation for both Indian languages and other country languages. Here we are using MATLAB to implement segmentation and performance analysis. This process can be implemented for comparisons of different scripts.

**keywords: performance analysis, projection profile algorithm, accuracy, segmentation.**



**EMOTION RECOGNITION THROUGH VISUAL FEATURES – INDIAN PERSPECTIVE**

**Paper ID-1417**

**A paper presented by:Sri.T.Narendra Babu,Dr.K.V.Daya Sagar**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract**

Poor attention of drivers towards driving can cause accidents that can harm the driver or surrounding people. The poor attention is not only caused by the drowsiness of the driver but also due to the various emotions/moods (for example sad, angry, normal, pleasure, despair and irritation) of the driver. The emotions are generally measured by analyzing either head movement patterns or eyelid movements or face expressions or all the lasts together. Concerning emotion recognition visual sensing of face expressions is helpful but generally not always sufficient. Therefore, one needs additional information that can be collected in a non-intrusive manner in order to increase the robustness of the emotion measurement in the frame of a nonintrusive monitoring policy. In this paper, an appropriate visual features emotion recognition applications are selected and extracted. For visual feature dimensionality reduction, Linear Discriminate Analysis (LDA) technique is used. For classification Sparse Representation Classifier (SRC) is used. The performance is evaluated on Yale database and Emotional databases. The result of the proposed approach significantly increases the performance of the automatic emotion recognition system.

**Keywords: Emotion recognition, visual features, Linear Discriminant analysis, sparse representation classifier**

**UNDESIRE WORDS FILTERING SYSTEM FROM OSN USERS**

**Paper ID-1418**

**A paper presented by:Sri.P.Gopi KrishnaSmt.P.S.G.Aruna Sri**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Social Media is spreading rapidly all over the world.Social media is the social interaction among people in which they create, share or exchange information and ideas in virtual communities and networks. Online social networking(OSNs) sites like Twitter, YouTube, and Face book are among the most popular sites on the Internet. Users of these web sites forms a social network, which provides a powerful means of sharing, organizing, and finding useful information .Unlike web information , the Online social networks (OSN) are organized around more number of users joins the network, shares their information and create the links to communicate with other online users. The resulting social network sites provides a basis for maintaining social relationships, for finding users with similar interests, and for locating content and knowledge that has been contributed or endorsed by other users. In OSNs information filtering can be used for avoiding the unwanted messages sharing or commenting on the user Walls. In this paper, we have proposed a system to filter undesired messages from OSN walls. The system exploits a machine learning soft classifier to enforce customizable content-dependent FRs. Moreover, the flexibility of the proposed system in terms of filtering options is enhanced through the management of BLs.

**Keywords— Filtered Wall, OSN, Black list, Content filtering, GUI.**

**A NOVEL APPROACH TO CONSERVE LOCATION PRIVACY IN GEO-SOCIAL APPLICATIONS**

**Paper ID-1419**

**A paper presented by:Sri.A.V.Prabhu**

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Andhra Pradesh, India

**Abstract**

Now a day's Geo-Social applications, such as FourSquare, using geo-social technology, enabling millions of people to interact with their surroundings through their friends and their recommendations. This paper describes the design, prototype implementation, and evaluation of LocX, a system for building location-based social applications (LBSAs) while preserving user location privacy. LocX provides location privacy for users without injecting uncertainty or errors into the system, and does not rely on any trusted servers or components. Without adequate privacy protection, however, these systems can be easily misused, e.g., to track users or target them for home invasion. In this paper, we introduce LocX, a novel alternative that provides significantly-improved location privacy without adding uncertainty into query results or relying on strong assumptions about server security. Our key insight is to apply secure user-specific, distance-reserving coordinate transformations to all location data shared with the server. The friends of a user share this user's secrets so they can apply the same transformation. This allows all location queries to be evaluated correctly by the server, but our privacy mechanisms guarantee that servers are unable to see or infer the actual location data from the transformed data or from the data access. We show that LocX provides privacy even against a powerful adversary model, and we use prototype measurements to show that it provides privacy with very little performance overhead, making it suitable for today's mobile devices.

**Keywords — Location privacy, security, location-based social applications, location transformation, efficiency.**

**PUBLIC AUDITING FOR REGENERATING-CODE-BASED CLOUD STORAGE-ON EFFICIENT  
PRIVACY PRESERVING**

**Paper ID-1420**

**A paper presented by:Sri.Vamsee Krishna,Sri K.Ravi kumar**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Cloud computing is one of the hottest buzzwords in technologies. It provides access to its users to various services that it provides. The emergence of this new technology allows users to access their files, software and computing power over the web. Information proprietors have their information on cloud servers and clients can get to the information from cloud servers. Because of the information outsourcing, in any case, this new worldview of information facilitating benefit additionally presents new security challenges, which requires an autonomous examining administration to check the information honesty in the cloud. users can remotely store their data and enjoy the on-demand high quality applications and services from a shared pool of configurable computing resources, without the burden of local data storage and maintenance. However, the fact that users no longer have physical possession of the outsourced data makes the data integrity protection in Cloud Computing a formidable task. Moreover, users should be able to just use the cloud storage as if it is local, without worrying about the need to verify its integrity. Thus, enabling public auditability for cloud storage is of critical importance so that users can resort to a third party auditor (TPA) to check the integrity of outsourced data and be worry-free. In this paper, we propose a secure cloud storage system supporting privacy-preserving public auditing. We further extend our result to enable the TPA to perform audits in multi-cloud storage efficiently. Public auditing is the service which is used to ensure integrity of the data stored on the cloud storage and save the cloud users' computation resources. To perform the auditing task the TPA known as third party auditor used to audit the stored data on cloud on the behalf of data owner. TPA verify the correctness of the cloud data on demand without retrieving a copy of the whole data. The TPA, has expertise and capabilities that can periodically check the integrity of all the data stored which provides a much more easier and affordable way for the users to ensure their storage correctness in the cloud.

**Keywords — Cloud Storage, Privacy Preserving, Public Auditing, Data integrity, Data security.**

**RAPID ALGORITHMS FOR EXTRACTION OF STRONG ASSOCIATION RULES FROM RDBMS**

**Paper ID-1421**

**A paper presented by:Dr.N.Venkatram VAMSI VELUGURIBASWANI KAVYA**

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Andhra Pradesh, India

**Abstract:**

Data mining is the most widely used field in the real world. Formation of rules is very important in the Data mining. Association rules are the one of the most important rules to improve the marketing business with the formation of strong association rules. In this paper, the rapid and hybrid rules is implemented to identify the important and original rules and relations between the items and item sets in big databases. Finding the strongest rules is most widely important task. The proposed system focus on finding the strong rules and original rules between the items. Results shows the performance of our rapid and fats algorithm.

**Keywords: RDBMS, liaison rules, data mining.**

**RFID- BACKED COMMUNITY HEALTHCARE SOLUTION FROM A CENTRAL MEDICAL  
FACILITY**

**Paper ID-1422**

**A paper presented by:Dr.J.K.R.Sastry PAVANI RAMYA DESUK VIJAYA MANASA**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Group based healthcare is perpetually basic for the prosperity of occupants of best in class economies. Without a various win demonstrate, the framework won't function admirably. The desire of a RFID-supported group healthcare arrangement is to permit simple and unswerving recognizable proof of individual patients, proceed with more precise restorative records, encourage better medicinal services, and build up the personal satisfaction in groups that are blocked off from a focal therapeutic office. There are relentless exposures to menace components.

**keywords: RFID, UART**

**ROLE OF CAD/CAM IN DESIGNING, DEVELOPING AND MANUFACTURING OF NEW  
THERMAL PRODUCTS**

**Paper ID-1423**

**A paper presented by: Sri N.V.K.Ramesh NAGA SRAVANI KOLLIPULI MAHESH**  
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Andhra Pradesh, India

**Abstract:**

Smart CAD/CAM technologies for superior product modeling in the intelligence of designing complete product variants become more and more pertinent in future. Many design techniques to help interdisciplinary design actions in different engineering domains in addition to consequent processes have to be developed. A necessary job to achieve this aim is to permanently investigate the present state of the art, emerging trends, new approaches, in addition to industrial problems and requirements about the entire CAD/CAM area. With the aim of direct future research and development activities as close as possible to the continuously rising requirements of a worldwide market we carried out a wide-ranging national study in cooperation with one of the Germans leading CAD/CAM magazines. In this way, it became possible to reach a representative amount of users, to obtain their experience based assessments on today's most important aspects of CAD/CAM technology. The results of this examination are summarized in this paper to give system developers, engineers, and researchers an overview of the present condition as well as to serve as a direction for decision makers in the Design and Development areas.

**Keywords:** CAD/CAM; CIM; CAPP; Product development; Design and Manufacture. □

**Role of Computer and Automation in Design and Manufacturing for Mechanical and Thermal Industries**

**Paper ID-1424**

**A paper presented by:Dr.G.Vijaya Kumar SAI ABHIGNA ANKAMMARAO**

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**Abstract**

luckily, the times when we needed to explain why we need a COMPUTER & CAD are history. Manufacturing industry witnessed not only a tremendous modernisation in technology but also adoption of information technology & computer science in massive scale. Automobile and fashion designing companies face significant challenges to remain competitive in today's industry, including supplying innovative collections at the right price, controlling margins, designing personalized garments, enhancing brand image, building customer loyalty and expanding business horizons. To unleash the creativity of the component designers, Computer Aided Design Technology and Automation is being used more and more in mechanical / textile industry (both in automatic and manual machines like power loom and handloom). Today, with the introduction of CAD and its many software capabilities, the possibilities are endless. These challenges can be faced by combining solutions such as CAD/CAM and 3D technologies with Internet tools to provide optimal solutions for meeting all requirements, from collection design to visual merchandising through production. Automation (CAD/CAM) involves all the processes of conceptualizing, designing, analysing, prototyping and actual manufacturing with Computer's assistance.

As Automation can be said as "A process without direct human activity in the process", so this paper goes through the need & necessity of computer (CAD/CAM) in mechanical and textile industry & as a helping tool in both industries. In this paper, the detail information of CAD/CAM and effect of Automation is being presented. The functions, applications & the points above, parameters, necessary for new century are discussed.

**Keywords— cad, cam, product design cycle, automation.**



**ASSURING INTEGRITY OF SCALABLE DISTRIBUTED SERVICES FOR SOFTWARE-AS-A-SERVICE CLOUDS**

**Paper ID-1425**

**A paper presented by:Dr.R.Bulli Babu MUNEER AHMED SHAIKGADDE LALITH KUMAR**  
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**Abstract**

Among the Services provided by the cloud. Software as a Service (SaaS) is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network, typically the Internet. However, due to their sharing nature, SaaS clouds are vulnerable to malicious attacks. SaaS cloud systems enable application service providers to deliver their applications via massive cloud computing infrastructures. In this paper, we present IntTest, a scalable and effective service integrity attestation framework for SaaS clouds. IntTest provides a novel integrated attestation graph analysis scheme that can provide stronger attacker pinpointing power than previous schemes. Moreover, IntTest can automatically enhance result quality by replacing bad results produced by malicious attackers with good results produced by benign service providers. We have implemented a prototype of the IntTest system and tested it on a production cloud computing infrastructure using IBM System S stream processing applications. Our experimental results show that IntTest can achieve higher attacker pinpointing accuracy than existing approaches. IntTest does not require any special hardware or secure kernel support and imposes little performance impact to the application, which makes it practical for large-scale cloud systems.

**Keywords — Distributed service integrity attestation, cloud computing, secure distributed data processing**

**SECURAB: SECURE INFORMATION IN MISTS**

**Paper ID-1426**

**A paper presented by: Sri.A.V.Prabhu NIKHIL SAI NARLASINGAMNENI VISHNU SRAVYA**  
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**Abstract**

Most present security arrangements depend on border security. In any case, Cloud figuring breaks the association borders. At the point when information lives in the Cloud, they dwell outside the hierarchical limits. This leads clients to loss of control over their information and raises sensible security worries that back off the reception of Cloud processing. Is the Cloud specialist co-op getting to the information? Is it honest to goodness applying the get to control strategy characterized by the client? This paper displays an information driven get to control arrangement with enhanced part based expressiveness in which security is centered around ensuring client information in any case the Cloud specialist co-op that holds it. Novel personality based and intermediary re-encryption systems are utilized to ensure the approval display. Information is scrambled and approval standards are cryptographically secured to save client information against the specialist co-op get to or bad conduct. The approval display furnishes high expressiveness with part chain of importance and asset progressive system bolster. The arrangement exploits the rationale formalism gave by Semantic Web advances, which empowers propelled govern administration like semantic clash identification. A proof of idea usage has been produced and a working prototypical organization of the proposition has been coordinated inside Google administrations.

**NOVEL APPROACHES FOR DATA TRANSMISSION IN CLUSTER-BASED WIRELESS SENSOR NETWORKS**

**Paper ID-1427**

**A paper presented by: Sri.M. Venkateswara rao TARUN NARRARISHI KORRAPOLU**  
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Andhra Pradesh, India

**Abstract**

Energy consumption is one of the biggest restraints of the wireless sensor node and these limitations besides a characteristic operation of greatest number of nodes added several tasks to the design management of wireless sensor networks. *The most critical issue in wireless sensor networks is secure data transmission. The system performance of WSNs can be improved by Clustering which is an effective and practical way to..* Clustering process includes, for sending and processing data high energy nodes are randomly selected and for send and sensing information to the cluster heads low energy nodes are used. Clustering method includes appointing leader from respective sensor nodes and when the leader node means cluster head is appointed, they collect the data *where the clusters are formed dynamically and periodically. We propose two Secure and Efficient data Transmission (SET) protocols for CWSNs, called SET-IBS and SET-IBOOS, by using the Identity-Based digital Signature (IBS) scheme and the Identity-Based Online/Offline digital Signature (IBOOS) scheme, respectively. In SET-IBS, security relies on the hardness of the Diffie-Hellman problem in the pairing domain. SET-IBOOS further reduces the computational overhead for protocol security, which is crucial for WSNs, while its security relies on the hardness of the discrete logarithm problem. We show the feasibility of the SET-IBS and SET-IBOOS protocols with respect to the security requirements and security analysis against various attacks. The calculations and simulations are provided to illustrate the efficiency of the proposed protocols.*

**Keywords**—Cluster-based WSNs, ID-based online/offline digital signature, secure data transmission protocol.

**SECURITY MECHANISM WITH MULTI-KEYWORD RANKED SEARCH SCHEME OVER  
ENCRYPTED IN CLOUD DATA**

**Paper ID-1428**

**A paper presented by:Sri.T.Narendra Babu,RAJAPU SAMUEL NIBHANUPUDI SRI NIDHI**  
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Andhra Pradesh, India

**Abstract**

Information technology which is motivating the data owners to outsource their data to the public cloud server like Amazon, Microsoft Azure, Google Drive, etc. With the help of data outsourcing, the organizations can provide reliable data services to their users without any concerns for the data management overhead. . Normally, CSPs (Cloud Service Providers) take care of the data and its privacy, but there are some of the factors because of which the data privacy and user identity may be violated like an apostate employee, etc. Therefore, data owners should encrypt their respective sensitive data before outsourcing it to the public cloud server. Because the data is getting encrypted before outsourcing which may affect the performance of some important data accessing operations like searching of a document, etc. Searchable encryption is a cryptographic method to provide security. In literature many researchers have been working on developing efficient searchable encryption schemes. , we present a secure multi-keyword ranked search scheme over encrypted cloud data, which simultaneously supports dynamic update operations like deletion and insertion of documents. Specifically, the vector space model and the widely-used TF×IDF model are combined in the index construction and query generation.

**Keywords —Multi Ranked-Search, Encrypted-Data Search, secure cloud.**

**A NEW INTEGRATED PRIVACY APPROACH FOR AUDITING IN CLOUD COMPUTING**

**Paper ID-1429**

**A paper presented by: Sri.P.Gopi Krishna TARUN NARRABOMMA REDDY AKHIL REDDY**  
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**Abstract:**

Cloud computing is the most widely used technology in the World Wide Web. Cloud computing services provide the efficient and effective storage services in the internet. Auditing is the most widely used mechanism in the cloud computing to provide the effective service to the customers. Providing privacy to user data is one of the most important tasks in the cloud. Here owner and third party auditor plays the major role to access the data. TPA will audit the data I,e without opening and updating the data. Admin will check the auditing process which is done by the TPA. In this paper, a new mechanism is implemented to provide the high level security to the cloud storage. This will provide the OTP for the user to access the account and data file will be split into blocks and each block contains the metadata. Thus we can say our proposed system will show the effective privacy.

**Keywords: Privacy, TPA, data owner, cloud computing.**

**AN OPTIMIZATION MODEL FOR SHARING VISUAL SECRETS IN SINGLE IMAGE**

**Paper ID-1430**

**A paper presented by:Sri.Vamsee Krishna**

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**Abstract** — The technique we use to share and protect secret images is Visual cryptography schemes (VCSs), which generate random and meaningless shares. Conventional VCSs suffer from a transmission risk problem because the noise-like shares will raise the suspicion of attackers and the attackers might intercept the transmission. Previous research has involved in hiding shared content in halftone shares to reduce these risks, but this method exacerbates the pixel expansion problem and visual quality degradation problem for recovered images. In this paper, a binocular VCS (BVCS), called the  $(2, n)$ -BVCS, and an encryption algorithm are proposed to hide the shared pixels in the single image random dot stereograms (SIRDSs). Because the SIRDSs have the same 2D appearance as the conventional shares of a VCS, this paper tries to use SIRDSs as cover images of the shares of VCSs to reduce the transmission risk of the shares. The encryption algorithm alters the random dots in the SIRDSs according to the construction rule of the  $(2, n)$ -BVCS to produce nonpixel expansion shares of the BVCS. Altering the dots in a SIRDS will degrade the visual quality of the reconstructed 3D objects. Hence, we propose an optimization model that is based on the visual quality requirement of SIRDSs to develop construction rules for a  $(2, n)$ -BVCS that maximize the contrast of the recovered image in the BVCS.

**Keywords** — Visual cryptography, single image random dot Stereograms, transmission risk, pixel expansion.

**SINGLE-PHASE RECTIFIER IS COMPOSED OF TWO PARALLEL SINGLE-PHASE HALF-BRIDGE RECTIFIERS**

**Paper ID-1431**

**A paper presented by:Dr.M.Kameswara Rao PALADUGU PADMINI MANOJ KUMAR KAMMA**  
Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Commercial and industrial electrical equipment requires three-phase power. Electric utilities do not install three-phase power as a matter of course because it cost significantly more than single-phase installation. Hence we need to conversion from single-phase to three-phase. Parallel converters have been used to improve the power capability, reliability, efficiency, and redundancy. Usually the operation of converters in parallel requires a transformer for isolation. This paper presents two single-phase to three-phase conversion systems for a three-phase load application. The load is connected to a single-phase grid through an ac–dc–ac single-phase to three-phase converter. The single-phase rectifier is composed of two parallel single-phase half-bridge rectifiers. The first proposed topology is composed of a full-bridge three-phase inverter, i.e., three-leg inverter, while the other topology is composed of a two-leg inverter. Suitable modeling, including the circulation current, and control strategy are presented. A pulse width modulation (PWM) technique using a single or double carriers PWM implementation is presented. Proposed topologies permit to improve the harmonic distortion. In addition, the P5L converter can reduce the converter power losses.

**Keywords:– Ac-dc-ac power converter, 3- phase three-phase power, parallel converter, full-bridge three-phase inverter.**

**SINGULAR VALUE DECOMPOSITION BASED AUDIO WATERMARKING SCHEME FOR  
COPYRIGHT PROTECTION**

**Paper ID-1432**

**A paper presented by:K.Bharathi,Dr.R.Bulli Babu**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
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**Abstract:**

Sound watermarking has been demonstrated as an effective device against illicit control of sound items. It is for the most part utilized as a sight and sound copyright assurance apparatus. In this paper, we propose a sound watermarking calculation in view of two numerical capacities: Discrete Wavelet Transform (DWT) and Singular Value Decomposition (SVD). These calculations execution is approved within the sight of the standard watermarking assaults. Another sound flag confining, DWTgrid development and installing techniques are proposed and effectively actualized to enhance the nature of watermarked sound. Normal inconstancy of discourse highlights permits watermarking modifications to be impalpable to thehuman onlooker. Then again, noteworthiness of these highlights makes the framework vigorous to regular flag handling activities.

**Keywords: Audio watermarking, Copyright Protection, DWT, SVD, Imperceptibility, Robustness.**



**SINGULAR VALUE DECOMPOSITION BASED AUDIO WATERMARKING SCHEME FOR  
COPYRIGHT PROTECTION**

**Paper ID-1433**

**A paper presented by: Sri.R.Karthik, Dr.K.V.Daya Sagar**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Sound watermarking has been demonstrated as an effective device against illicit control of sound items. It is for the most part utilized as a sight and sound copyright assurance apparatus. In this paper, we propose a sound watermarking calculation in view of two numerical capacities: Discrete Wavelet Transform (DWT) and Singular Value Decomposition (SVD). These calculations execution is approved within the sight of the standard watermarking assaults. Another sound flag confining, DWT grid development and installing techniques are proposed and effectively actualized to enhance the nature of watermarked sound. Normal inconstancy of discourse highlights permits watermarking modifications to be impalpable to the human onlooker. Then again, noteworthiness of these highlights makes the framework vigorous to regular flag handling activities.

**Keywords: Audio watermarking, Copyright Protection, DWT, SVD, Imperceptibility, Robustness.**

**SMART HELMET BASED ACCIDENT DETECTION POSITIONING AND RESCUE SYSTEM WITH  
PRIORITIZED TRAFFIC SWITCHING**

**Paper ID-1434**

**A paper presented by:A. Yaraswini, K.V.DayaSagar,K. Vishnu, Hari nandhan  
Department of ECM, K L E F Vaddeswaram.**

**Abstract:**

There is loss of life as a result of the delay within the arrival of ambulance to the hospital within the golden hour. This delay is especially caused by the waiting of the ambulance within the traffic signals. The most themes behind this theme is to produce a sleek flow for the emergency vehicles like ambulance to succeed in the hospitals in time and therefore minimizing the delay caused by traffic jam. The thought behind this theme is to implement ARSPTS which might manage automatically the traffic lights within the path of the ambulance. The ambulance is controlled by the control unit that furnishes adequate route to the ambulance and conjointly controls the stoplight in step with the ambulance location and therefore reaching the hospital safely. The controller identifies the situation of the accident spot through the measuring system within the vehicle and therefore the controller walks through the ambulance to the spot. This theme is totally ambulance -controlled, therefore it finds the accident spot, controls the traffic lights, serving to succeed in the hospital in time.

**Keywords: raspberry pi. ARM 7, Wi-Fi, GPS**

**SOCIAL MEDIA GATE KEEPER: AN EFFICIENT AND SCALABLE SPAM URL'S DETECTION  
MECHANISM FOR SOCIAL NETWORKING APPLICATIONS**

**Paper ID-1435**

**A paper presented by:Ms.K.Krishnaveni P.S.G.Aruna Sri**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:** Today, the social networking applications like Twitter, Facebook, LinkedIn and Google+ are reporting the great improvement in their accounts creation. Due to wide features and advantages the people are attracted towards them and creating the personal and group accounts to maintain the communication. As a part of their communication, the people started sharing of text, URLs, images, audio, video etc. Attackers set these social networking applications as their target to execute the malicious operations like Spam URLs, Man-In-Middle attacks, phishing and malware spreading. Among these, Spam URLs is the most possible way of attack, which is very hard to discover and mitigate. Previous systems like time-based evasion, Crawler evasion and Warning Bird are failed to identify and mitigate the Spam URL's from tweets (or scraps) on time. Our research considered them as Post-Process Spam URL detection mechanisms, which works after the links (URL's) have been shared among users. In this paper, we are introducing a new Pre-Process Spam URL detection mechanism is called as "Social Media Gate Keeper (SMGK)" to protect the social networks from Spam URLs. This is designed as a java plug-in to adopt for several social networking applications to mitigate the SPAM URLs. Research experiments are proven that our mechanism mitigated the ratio of Spam URL's than its counterparts.

**Keywords:** Social Networks, Spam URL's, SMGK, Warning bird, Spam Detection.

**STRUCTURAL ANALYSIS OF CAR ALLOY WHEEL USING ALUMINUM AND MAGNESIUM  
ALLOYS**

**Paper ID-1436**

**A paper presented by:Sri.M.Ramesh Kumar,Sri.M. Venkateswara rao**

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Andhra Pradesh, India

**Abstract:** Automobile wheels have in the time period spanning the last five decades progressively evolved from the early spoke design of wood and steel the carryovers from wagon and bicycle technology, flat steel discs, and more recently stamped metal configurations. The metal configurations are made from either cast or cast plus forged aluminum alloys in the present and newer generations of ground vehicles. Historically, successful design was arrived after years of experience well aided worth extensive field-testing. Since the 1970's several innovative methods of testing and experimental stress measurements have been initiated. This project work summarizes the application of Finite Element Techniques for analyzing stress and displacement distribution in vehicle wheels subjected to the conjoint influence of inflation pressure and radial load. The most commonly used considerations in wheel are elucidated. The model is done by using "PRO/E," and the analysis is carried out by using "ANSYS" finite element package. The wheel is modeled by using ten noded tetrahedron solid elements; the constitutive material model selected for the analysis is linear elastic with isotropic conditions. Wheel strength with regard to the fractures on edges and other critical points when the wheel strikes an obstacle shall be checked. In order to show the sufficient resistance to fractures it is necessary to carry out an impact test. An impact load of 9810 N (as per SAE standards) is applied on the wheel at a determined angle. The modal analysis is carried out for observing the natural frequencies. Static analysis for the given load of 3678.75 N static load and the angular velocities of 40, 80, 120, and 160, with the appropriate constraint set of conditions in order to check the wheel strength. The analysis is compared with experimental data. Yield stress (195Mpa) of the alloy wheel material is checked with the von-mises stress obtained, (as per the ISO 7141 - Road Vehicles - Wheels - Impact Test Procedure, and SAE J175 - Impact Test Procedures standards). Therefore the study states that the innovative design of the wheel is safe for its operating conditions for the given loads specified.

**SUPPORTING WEAK IMAGE ANNOTATIONS FOR SIMILAR FACIAL IMAGE RETRIEVALS**

**Paper ID-1437**

**A paper presented by:Dr.J.K.R.Sastry SRI RAMAN NIKHIL SAI NARLA**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

The web search tool returns a great many pictures positioned by the essential words separated from the encompassing content. Existing article acknowledgment systems to prepare characterization models from human-named preparing pictures or endeavor to deduce the connection/probabilities in the middle of pictures and commented magic words. Albeit proficient in supporting in mining comparatively looking facial picture results utilizing feebly named ones, the learning phase of above bunch based close estimations is shortened with idleness elements for ongoing usage which is fundamentally highlighted in our showings. So we propose to utilize shading based division driven auto face location methodology combined with an adjusted Clustering Based Approximation (CBA) plan to decrease the dormancy but then holding same proficiency amid questioning. The specialized phases of our proposed drew closer is highlighted in the accompanying stream diagram. Every phase of the above specialized procedure guarantees the question results at tremendously lessened handling time in this way making our method much achievable for ongoing usage.

**Index Terms: Clustering based Approximation, Facial Image retrieval, Data mining Image retrieval.**

**A SURVEY OF FREQUENT AND INFREQUENT ASSOCIATION RULE MINING MODELS**

**Paper ID-1438**

**A paper presented by: Sri N.V.K.Ramesh, K Raj Gopal Reddy TARUN NARRA**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Mining frequent and infrequent patterns is a major task of association rule mining research. Traditional association rule mining models are responsible for identifying correlated patterns, frequent patterns from the large candidate sets of transaction databases. However, mining infrequent patterns has also attracted the attention of many researchers in different domain fields. Traditional frequent and infrequent patterns model use two measures; support and confidence as threshold to filter the item sets as positive and negative items. Item sets exceeding minimum thresholds are selected as interesting item sets and rest of them are considered as infrequent patterns. The main issues of the traditional association rule mining models are high computational time, repeated I/O scans and require large storage space for computation. In this paper, we have studied and analyzed various frequent and infrequent association rule mining models and their comparisons. We have also analyzed pros and cons of each model and presented a comparative analysis.

**Keywords—Infrequent patterns, Support.**

**TOP WITHOUT KEYWORD INCLUDED QUERY PROCESSOR**

**Paper ID-1439**

**A paper presented by:Ms.K.Krishnaveni P.S.G.Aruna Sri**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Profitably noticing XML catchphrase request has pulled in much research effort in the latest decade. The key parts realizing the inefficiency of existing procedures are the general ancestor emphasis (CAR) and going to trivial centers (VUN) issues. To address the CAR issue, we propose a nonexclusive best down getting ready strategy to answer a given watchword request w.r.t. LCA/SLCA/ELCA semantics. By "top-down", we suggest that we visit all typical forerunner (CA) centers in a significance in the first place, left-to-redress ask for; by "non particular", we infer that our technique is free of the inquiry semantics. To address the VUN issue, we propose to use youth center points, instead of relative center points to test the satisfiability of a center v w.r.t. the given semantics. We propose two estimations that rely upon either ordinary modified records or our as of late proposed LLists to improve the general execution. We furthermore propose a couple of computations that rely upon hash interest to enhance the operation of finding CA center points from all included LLists. The exploratory results affirm the upsides of our systems as demonstrated by various evaluation estimations.

**TRAFFIC SIGNAL CONTROL SYSTEM**

**Paper ID-1440**

**A paper presented by: Smt.P.S.G.Aruna Sri, NAIDU MOUNIKA SAI LAKSHMI HARIKRISHNA  
BEZAWADA**

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Andhra Pradesh, India

**Abstract:**

Vehicular traffic is continuously increasing around the world, especially in large urban areas. The resulting congestion has become a major concern to transportation specialists and decision makers. The existing methods for traffic management, surveillance and control are not adequately efficient in terms of performance, cost, maintenance, and support. In this paper, the design of a system that utilizes and efficiently manages traffic light controllers is presented. In particular, we present an adaptive traffic control system based on a new traffic infrastructure using Traffic Sensor (TrS) and using new techniques for controlling the traffic flow sequences. These techniques are dynamically adaptive to traffic conditions on both single and multiple intersections. A WSN is used as a tool to instrument and control traffic signals roadways, while an intelligent traffic controller is developed to control the operation of the traffic infrastructure supported by the WSN. The controller embodies traffic signal switching algorithm (TSSA). This algorithm is able to provide the system with adaptive and efficient traffic estimation represented by the dynamic change in the traffic signals' flow sequence and traffic variation. Simulation results show the efficiency of the proposed scheme in solving traffic congestion by changing the signal based on density and temperature. provides efficient global traffic flow control on multiple intersections. A test bed was also developed and deployed for real measurements. The paper concludes with some future highlights and useful remarks.

**Keywords:** sensor networks, intelligent traffic controller, traffic congestion, traffic signal based on density, traffic signal based on temperature, traffic flow control



**TRANSFORMATIONS AND QUANTIZATION'S BASED AUDIO WATERMARKING ALGORITHM  
FOR COPYRIGHT PROTECTION**

**Paper ID-1441**

**A paper presented by:Sri.A.V.Prabhu**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract -**

The central idea of this paper is to propose a healthy sound watermarking count using true parameters and essentialness of the banner in the discrete wavelet space and besides using discrete cosine change. The execution of the count is given by evaluating the execution parameters, for instance, the banner to commotion extent, institutionalized association, and bit botch rate. Besides, the effects of the quantization make, for instance, single regard quantization and mean quantization on these sections are given.

Keywords - Audio watermarking, DCT, DWT, Encryption, Quantization.

**TWITTER TRENDS MANIPULATION: SPAM DETECTION IN TWITTER**

**Paper ID-1442**

**A paper presented by:Dr.J.K.R.Sastry SRI RAMAN NIKHIL SAINARLA**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:** Online social networks, which include Twitter, Face book, and other social network, have emerge popular within few years. Twitter is a social networking and micro-blogging service. Users spend plenty of time on Twitter by reading news, discussing events and posting messages. Data is collected using the live public tweets in real time, twitter trends are manipulated by using Naive Bayes classifier. This trending topic also attracts a significant amount of spammers who continuously expose malicious behaviour leading to great misunderstanding and inconvenience on users social activities. Spammers pose tweets either as advertisements, scams and help perpetrate phishing attacks or the spread of malware. In building an online spam-detection service, that would take the URL of a tweet and categorize it as spam or not. To classify tweets into spam and non-spam, the tweets are being applied into Random Forest Classifier. It tries to detect, is a tweet is spam or not based on properties of the tweet like the presence of some keywords, types of hash tags present. The proposed work shows that it is capable to provide better performance with twitter trending topics and true positive rate of spam and non-spam.

**Keywords:** Social Network, Spam messages, Twitter trends.

**TWO STAGE SECURITY SYSTEM FOR HOUSEHOLDS USING RASPBERRY PI AND OPEN CV**

**Paper ID-1443**

**A paper presented by:Sri.P.Vikram KAVYA YAMINEE REPALLE**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:**

Smart home security and monitoring have become vital and indispensable in recent times, and with the advent of new concepts like Internet of Things and development of advanced authentication and security technologies, the need for smarter security systems has only been growing. The design and development of an intelligent door lock control system using finger print and face recognition technology, for authentication, remote monitoring of visitors and remote control of smart door lock has been reported in this paper. This system uses Haar-like features for face detection and Local Binary Pattern Histogram (LBPH) for face recognition. The system also includes a web-based remote monitoring, an authentication module, and a bare-bones embedded IoT server, which transmits the live pictures of the visitors via email along with an SMS notification. The system has been implemented and tested using the Raspberry Pi board, Python along with OpenCV are used to program the various face recognition and control modules.

**Keywords: Raspberry Pi, Python, finger print sensor, camera**

**ENSEMBLE RAPID CLUSTERING ALGORITHM FOR MINING WEB DOCUMENTS**

**Paper ID-1444**

**A paper presented by: Sri.T.Narendra Babu, VIJAYA MANASA DIVYA SREE DEVINENI**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract:** Clustering is one of the raising techniques in data mining. From the past more and more data is collected by the companies for various purposes from multiple databases. Finding the patterns is one of the challenging tasks from various sources. Clustering is the method for finding similar groups in same group or another and from different groups. Number of multi-view clustering has been introduced to integrate different views of data. The challenging problem is to join the large-scale data clustering's with heterogeneous features. In this paper, proposed system focuses on hybrid-fast multi-view clustering algorithm to integrate heterogeneous representations of large scale data. Results will show the performance of our proposed system.

**Keywords:** Clustering, multi-view, large scale data.

**ALERTBIRD: A SYSTEM FOR DETECTING SUSPICIOUS URLS IN TWITTER STREAM**

**Paper ID-1445**

**A paper presented by: N.V.K.Ramesh KALAPALA SRAVYA MANASA SANKA.**

Department of Electronics and Computer Engineering, K L University, Green Fields, Vaddeswaram, Guntur Dt.  
Andhra Pradesh, India

**Abstract**

Twitter is vulnerable to malicious tweets containing URLs for spam, phishing, and malware distribution. Conventional Twitter spam detection schemes utilize account features such as the ratio of tweets containing URLs and the account creation date, or relation features in the Twitter graph. These detection schemes are ineffective against feature fabrications or consume much time and resources. Conventional suspicious URL detection schemes utilize several features including lexical features of URLs, URL redirection, HTML content, and dynamic behavior. However, evading techniques such as time-based evasion and crawler evasion exist. In this paper, we propose ALERTBIRD, a suspicious URL detection system for Twitter. Our system investigates correlations of URL redirect chains extracted from several tweets. Because attackers have limited resources and usually reuse them, their URL redirect chains frequently share the same URLs. We develop methods to discover correlated URL redirect chains using the frequently shared URLs and to determine their suspiciousness. We collect numerous tweets from the Twitter public timeline and build a statistical classifier using them. Evaluation results show that our classifier accurately and efficiently detects suspicious URLs. We also present ALERTBIRD as a near real-time system for classifying suspicious URLs in the Twitter stream.

**Keywords** — Suspicious URL, Twitter, URL redirection, conditional redirection, classification.

**WIDEBAND NOTCHED RECTANGULAR DRA**

**Paper ID-1446**

**A paper presented by:Dr.M.D.Ali Hussain MEDURI VINAYAK MADHURI JASTI**

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Andhra Pradesh, India

**Abstract:**

In this work, a wideband notched rectangular DRA is presented. The proposed antenna is placed on a rectangular ground plane and four notches of equal size and equally spaced are grooved at the bottom before excited by a probe to give a wide 10-dB impedance bandwidth of 37.8% between 2.25GHz and 3.3GHz. The antenna has an average gain of 4.45dBi with broadside radiation pattern as expected. HFSS2014 is main tool used in this study.

**Keywords:** Dielectric Resonator Antenna (DRA), Wideband.

**Securely Sharing of Personal Health Records using Attribute-Based Encryption in Cloud Computing**

**Paper ID-1447**

**A paper presented by: Smt..P.S.G.Aruna Sri KOVVURI JAYA ROHIT SAI KAVYA AAKAVEETI**  
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Andhra Pradesh, India

**Abstract**

Personal health record (PHR) is an evolving patient-centric model of health information exchange, which is often outsourced to be stored at a third party, such as cloud providers. Outsourcing Medical Details is a common phenomenon. Personal health record (PHR) is an emerging patient-centric model of health information exchange, which is often outsourced to be stored at a third party, such as cloud providers. However, there have been wide privacy concerns as personal health information could be exposed to those third party servers and to unauthorized parties. To assure the patients' control over access to their own PHRs, it is a promising method to encrypt the PHRs before outsourcing. Yet, issues such as risks of privacy exposure, scalability in key management, flexible access, and efficient user revocation, have remained the most important challenges toward achieving fine-grained, cryptographically enforced data access control. In this paper, we propose a novel patient-centric framework and a suite of mechanisms for data access control to PHRs stored in semitrusted servers. To achieve fine-grained and scalable data access control for PHRs, we leverage attribute-based encryption (ABE) techniques to encrypt each patient's PHR file. Different from previous works in secure data outsourcing, we focus on the multiple data owner scenario, and divide the users in the PHR system into multiple security domains that greatly reduces the key management complexity for owners and users. A high degree of patient privacy is guaranteed simultaneously by exploiting multiauthority ABE. Our scheme also enables dynamic modification of access policies or file attributes, supports efficient on-demand user/attribute revocation and break-glass access under emergency scenarios. Extensive analytical and experimental results are presented which show the security, scalability, and efficiency of our proposed scheme.

**Keywords— Cloud computing, Personal health records, data privacy, fine-grained access control, attribute-based encryption.**

**STUDY ON SELECTING THE OPTIMAL ALGORITHM AND THE EFFECTIVE METHODOLOGY  
TO ANN-BASED SHORT-TERM LOAD FORECASTING MODEL**

**Paper ID-1448**

**A paper presented by: B Ramakrishna<sup>1</sup>, T Srikanth<sup>2</sup>, M Naga Chaitanya<sup>3</sup>, T Vijay Muni<sup>4</sup>**

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<sup>3,4</sup> Asst. Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

Recently, power companies apply optimal algorithms for short-term load forecasting, especially the daily load. However, in Vietnam, the load forecasting of the power system has not focused on this solution. Optimal algorithms can help experts improve forecasting results including accuracy and the time required for forecasting. To achieve both goals, the combinations of different algorithms are still being studied. This article describes research using a new combination of two optimal algorithms: Genetic Algorithm (GA) and Particle Swarm Optimization (PSO). This combination limits the weakness of the convergence speed of GA as well as the weakness of PSO that it easily falls into local optima (thereby reducing accuracy). This new hybrid algorithm was applied to the Southern Power Corporation's (SPC—a large Power company in Vietnam) daily load forecasting. The results show the algorithm's potential to provide a solution. The most accurate result was for the forecasting of a normal working day with an average error of 1.15% while the largest error was 3.74% and the smallest was 0.02%. For holidays and weekends, the average error always approximated the allowable limit of 3%. On the other hand, some poor results also provide an opportunity to re-check the real data provided by SPC.



**A SGAM-BASED TEST PLATFORM TO DEVELOP A SCHEME FOR WIDE AREA MEASUREMENT-FREE  
MONITORING OF SMART GRIDS UNDER HIGH PV PENETRATION**

**Paper ID-1449**

**A PAPER PRESENTED BY:K.S.SRIKANTH, M .KIRANKUMAR, G .G .RAJA SEKHAR**

Department of EEE, koneru Lakshmaiah Education Foundation, Green Fields, Vaddeswaram, Guntur, Ap ,India

**Abstract:**

In order to systematically shift existing control and management paradigms in distribution systems to new interoperable communication supported schemes in smart grids, we need to map newly developed use cases to standard reference models like Smart Grid Architecture Model (SGAM). From the other side, any new use cases should be tested and validated ex-ante before being deployed in the real-world system. Considering various types of actors in smart grids, use cases are usually tested using co-simulation platforms. Currently, there is no efficient co-simulation platform which supports interoperability analysis based on SGAM. In this paper, we present our developed test platform which offers a support to design new use cases based on SGAM. We used this platform to develop a new scheme for wide area monitoring of existing distribution systems under growing penetration of Photovoltaic production. Off-the-shelf solutions of state estimation for wide area monitoring are either used for passive distribution grids or applied to the active networks with wide measurement of distributed generators. Our proposed distribution state estimation algorithm does not require wide area measurements and relies on the data provided by a PV simulator we developed. This practical scheme is tested experimentally on a realistic urban distribution grid. The monitoring results shows a very low error rate of about 1% by using our PV simulator under high penetration of PV with about 30% error of load forecast. Using our SGAM-based platform, we could propose and examine an Internet-of-Things-based infrastructure to deploy the use case.

**THIN CONDUCTOR MODELLING COMBINED WITH A HYBRID NUMERICAL METHOD TO EVALUATE THE  
TRANSFERRED POTENTIAL FROM ISOLATED GROUNDING SYSTEM**

**Paper ID-1450**

**A PAPER PRESENTED BY:S.V.N.L LALITHA**

Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

Grounding systems are essential parts of substations and power generation stations. The evaluation of transferred potentials from an active grounding system to other passive ones or to any near conductors is an important aspect to be considered, because transferred potentials may cause serious and fatal events. Moreover, it is an intrinsic issue of the Smart Grid where the ground systems of the power and ICT systems could be close to each other. Therefore, the estimation of the transferred potential is necessary at grounding system design stage for people safety and electric components safeguard. Numerical methods are the best choice to perform a truthful estimation, especially when large and complex grounding systems have to be designed. However, this task is complicated by the “unbounded” nature of the electromagnetic field and by the presence of components of extremely different size in the analysis domain. In this paper, an efficient hybrid finite element method is applied for the accurate and fast computation of transferred earth potentials from grounding systems. Moreover, the small dimensions of the components in the analysis domain are taken into account by the use of one-dimensional finite elements inserted in the tetrahedral mesh. It is worth mentioning the additional advantage of obtaining the electric potential on the earth surface without any post-processing operation.

**A DRIVING TECHNIQUE FOR AC-AC DIRECT MATRIX CONVERTERS BASED ON SIGMA-  
DELTA MODULATION**

**Paper ID-1451**

**A paper presented by: Nagi Reddy. B<sup>1</sup>, A. Pandian<sup>2</sup>, M. Ramamoorthy<sup>3</sup>**

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<sup>2,3</sup>Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

Direct conversion of AC power between three-phase systems operating at different frequencies can be achieved using solid-state circuits known as matrix converters. These converters do not need energy storage elements, but they require sophisticated control algorithms to operate the switches. In this work we propose and evaluate the use of a sigma-delta modulation approach to control the operation of a direct matrix converter, together with a revised line filter topology suited to better handle the peculiarities of the switching noise produced by the sigma-delta modulation. Simulation results show the feasibility of such an approach, which is able to generate arbitrary output waveforms and adjust its input reactive power. Comparison with a space vector modulation implementation shows also better performance about total harmonic distortion, i.e., less harmonics in the input and output.

**A MICRO FORECASTING MODULE FOR ENERGY MANAGEMENT IN RESIDENTIAL AND TERTIARY BUILDINGS**

**Paper ID-1452**

**A PAPER PRESENTED BY:G JAHNAVICHOWDARY<sup>1</sup>, S. PALANI KUMAR<sup>2</sup>**

<sup>1</sup>PG Student, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

<sup>2</sup>Associate Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

The paper describes the methodology used for developing an electric load micro forecasting module to be integrated in the Energy Management System (EMS) architecture designed and tested within the “Energy Router” (ER) project. This Italian R&D project is aimed at providing non-industrial active customers and prosumers with a monitoring and control device that would enable demand response through optimization of their own distributed energy resources (DERs). The optimal control of resources is organized with a hierarchical control structure and performed in two stages. A cloud-based computation platform provides global control functions based on model predictive control whereas a closed-loop local device manages actual monitoring and control of field components. In this architecture, load forecasts on a small scale (a single residential or tertiary building) are needed as inputs of the predictive control problem. The micro forecasting module aimed at providing such inputs was designed to be flexible, adaptive, and able to treat data with low time resolution. The module includes alternative forecasting techniques, such as autoregressive integrated moving average (ARIMA), neural networks, and exponential smoothing, allowing the application of the right forecasting strategy each time. The presented test results are based on a dataset acquired during a monitoring campaign in two pilot systems, installed during the ER Project in public buildings.

**AGEING AND EFFICIENCY AWARE BATTERY DISPATCH FOR ARBITRAGE MARKETS USING  
MIXED INTEGER LINEAR PROGRAMMING**

**Paper ID-1453**

**A paper presented by: Sudha Dukkipati<sup>1</sup>, P Siva Shankar<sup>2</sup>, A V G A Marthanda<sup>3</sup>**

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<sup>3</sup>Department of Electrical and Electronics, LakireddyBalireddy College of Engineering, Mylavaram, India.

**Abstract**

To achieve maximum profit by dispatching a battery storage system in an arbitrage operation, multiple factors must be considered. While revenue from the application is determined by the time variability of the electricity cost, the profit will be lowered by costs resulting from energy efficiency losses, as well as by battery degradation. In this paper, an optimal dispatch strategy is proposed for storage systems trading on energy arbitrage markets. The dispatch is based on a computationally-efficient implementation of a mixed-integer linear programming method, with a cost function that includes variable-energy conversion losses and a cycle-induced battery capacity fade. The parametrisation of these non-linear functions is backed by in-house laboratory tests. A detailed analysis of the proposed methods is given through case studies of different cost-inclusion scenarios, as well as battery investment-cost scenarios. An evaluation with a sample intraday market data set, collected throughout 2017 in Germany, offers a potential monthly revenue of up to 8762 EUR/MWhcap installed capacity, without accounting for the costs attributed to energy losses and battery degradation.

**DAILY OPERATION OPTIMIZATION OF A HYBRID ENERGY SYSTEM CONSIDERING A  
SHORT-TERM ELECTRICITY PRICE FORECAST SCHEME**

**Paper ID-1454**

**A paper presented by: D Narasimha Rao , P Srinivasa Varma,**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

The scenario where the renewable generation penetration is steadily on the rise in an increasingly atomized system, with much of the installed capacity “sitting” on a distribution level, is in clear contrast with the “old paradigm” of a natural oligopoly formed by vertical structures. Thereby, the fading of the classical producer–consumer division to a broader prosumer “concept” is fostered. This crucial transition will tackle environmental harms associated with conventional energy sources, especially in this age where a greater concern regarding sustainability and environmental protection exists. The “smoothness” of this transition from a reliable conventional generation mix to a more volatile and “parti-colored” one will be particularly challenging, given escalating electricity demands arising from transportation electrification and proliferation of demand-response mechanisms. In this foreseeable framework, proper Hybrid Energy Systems sizing, and operation strategies will be crucial to dictate the electric power system’s contribution to the “green” agenda. This paper presents an optimal power dispatch strategy for grid-connected/off-grid hybrid energy systems with storage capabilities. The Short-Term Price Forecast information as an important decision-making tool for market players will guide the cost side dispatch strategy, alongside with the storage availability. Different scenarios were examined to highlight the effectiveness of the proposed approach.

**POWER MANAGEMENT CONTROL STRATEGY BASED ON ARTIFICIAL NEURAL NETWORKS FOR STANDALONE  
PV APPLICATIONS WITH A HYBRID ENERGY STORAGE SYSTEM**

**Paper ID-1455**

**A PAPER PRESENTED BY: K. P. PRASAD RAO<sup>1</sup>, SRINIVASA VARMA P<sup>2</sup>**

<sup>1</sup>Research Scholar, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

<sup>2</sup>Associate Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP,  
India.

**Abstract**

Standalone microgrids with photovoltaic (PV) solutions could be a promising solution for powering up off-grid communities. However, this type of application requires the use of energy storage systems (ESS) to manage the intermittency of PV production. The most commonly used ESSs are lithium-ion batteries (Li-ion), but this technology has a low lifespan, mostly caused by the imposed stress. To reduce the stress on Li-ion batteries and extend their lifespan, hybrid energy storage systems (HESS) began to emerge. Although the utilization of HESSs has demonstrated great potential to make up for the limitations of Li-ion batteries, a proper power management strategy is key to achieving the HESS objectives and ensuring a harmonized system operation. This paper proposes a novel power management strategy based on an artificial neural network for a standalone PV system with Li-ion batteries and super-capacitors (SC) HESS. A typical standalone PV system is used to demonstrate and validate the performance of the proposed power management strategy. To demonstrate its effectiveness, computational simulations with short and long duration were performed. The results show a minimization in Li-ion battery dynamic stress and peak current, leading to an increased lifespan of Li-ion batteries. Moreover, the proposed power management strategy increases the level of SC utilization in comparison with other well-established strategies in the literature.

**TRANSFORMATION OF AN OFFICE BUILDING INTO A NEARLY ZERO ENERGY BUILDING  
(NZEB): IMPLICATIONS FOR THERMAL AND VISUAL COMFORT AND ENERGY  
PERFORMANCE  
Paper ID-1456**

**A PAPER PRESENTED BY: PRASHANTH K PULIVARTHI, SVS SURYA TEJA, M SURYA TEJA, R PREMSAI, P  
PADMALATHA**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

Directive 2010/31/EU promotes the refurbishment of existing buildings to change them into nearly zero-energy buildings (nZEBs). Within this framework, it is of crucial importance to guarantee the best trade-off between energy performance and indoor environmental quality (IEQ). The implications of a global refurbishment scenario on thermal and visual comfort are assessed in this paper pertaining to an existing office building. The retrofit actions applied to achieve the nZEB target consist of a combination of envelope and technical building systems refurbishment measures, involving both HVAC and lighting. Energy and comfort calculations were carried out through dynamic simulation using Energy Plus and DIVA, for the thermal and visual performance assessments, respectively. The results point out that energy retrofit actions on the building envelope would lead to significant improvements in the thermal performance, regarding both energy savings (−37% of the annual primary energy for heating) and thermal comfort. However, a daylighting reduction would occur with a consequent higher electricity demand for lighting (36%). The research presents a detailed approach applicable to further analyses aimed at optimizing the energy efficiency measures in order to reduce the imbalance between visual and thermal comfort and to ensure the best performance in both domains.



**ANALYSIS OF NUMERICAL METHODS TO INCLUDE DYNAMIC CONSTRAINTS IN AN OPTIMAL POWER FLOW  
MODEL**

**Paper ID-1457**

**A PAPER PRESENTED BY: B. JYOTHI, A. PANDIAN**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India..

**Abstract**

The optimization of the operation of power systems including steady state and dynamic constraints is efficiently solved by Transient Stability Constrained Optimal Power Flow (TSCOPF) models. TSCOPF studies extend well-known optimal power flow models by introducing the electromechanical oscillations of synchronous machines. One of the main approaches in TSCOPF studies includes the discretized differential equations that represent the dynamics of the system in the optimization model. This paper analyzes the impact of different implicit and explicit numerical integration methods on the solution of a TSCOPF model and the effect of the integration time step. In particular, it studies the effect on the power dispatch, the total cost of generation, the accuracy of the calculation of electromechanical oscillations between machines, the size of the optimization problem and the computational time.

**OVERVIEW OF IMPLEMENTING MICROGRID, ITS POLICIES, INCENTIVES AND  
CHALLENGES**

**Paper ID-1458**

**A paper presented by:K V Siva Reddy , S. Ravi Teja**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India..

**Abstract**

Microgrids (MG) has become the most imperative issue in the modern research. A microgrid is a cluster of distributed energy resources (DER) along with energy storage devices in the premises of load, which provides the opportunity to employ renewable energy resources (RES), along with the traditional power system. In most of the developing countries like India, ageing and overloading of the transmission lines is one of the major problem in energy system. The old infrastructure of electric power grid is not proficient of compensating the increased demand of power. However, these effects can be encountered by deploying the distributed energy resources nearby to the load. Apart from technical constrains, there are certain non-technical issues regarding deployment of microgrids in India. This survey investigates the problems associated with the implementation of microgrid and its challenges, which hinder its deployment in Pakistan. In this paper microgrid policies of India, challenges and driving factors of microgrid have been investigated. This will help to motivate the people to implement DER's and MG. Ultimately it will accelerate the implementation process of MG and will improve the overall power system of India.

**SENSORLESS VECTOR CONTROL OF THE IM DRIVES FOR AN URBAN ELECTRIC VEHICLE USING  
LUENBERGER OBSERVER WITH FUZZY ADAPTATION MECHANISM**

**Paper ID-1459**

**A PAPER PRESENTED BY: NAGI REDDY. B<sup>1</sup> , A. PANDIAN<sup>2</sup>**

<sup>1</sup>Research Scholar, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

<sup>2</sup>Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

For a clean, efficient and environmentally friendly urban transportation system, electric vehicles (EVs) and hybrid electric vehicles (HEV) are the best alternatives. For propulsion, many choices can be done by making a trade-off between, cost, mass, volume, efficiency, reliability, maintenance, etc. There is mainly the induction machine, permanent magnet synchronous machine, and switched reluctance machine. In order to reduce costs, it was suitable to remove the sensors, particularly the flux and speed sensors, and replace them with an observer that allows the estimation of these quantities based on the measurement of currents and voltages. Thus, the sensorless control takes its place among the techniques of control of the electric motors. However, few observers are effective and act correctly on motor control. This is due to their sensitivity to the parameters of the machine, measurement disturbances, dynamics at low speeds, etc. In this paper, the sensorless vector control of the IM is discussed by using the Luenberger observer. The study is based on different adaptation mechanisms to estimate the speed such as the conventional PI and the fuzzy mechanism.

**INCREASE IN THE USE OF ELECTRIC VEHICLES AND ITS POTENTIAL EFFECTS ON ELECTRICITY  
DISTRIBUTION NETWORK AND SITUATION ANALYSIS**

**Paper ID-1460**

**A PAPER PRESENTED BY: L. SRI SIVANI<sup>1</sup>, NAGI REDDY B<sup>2</sup>, K. SUBBA RAO<sup>3</sup>, A. PANDIAN<sup>4</sup>**

<sup>1</sup>PG Student, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

<sup>2</sup>Research Scholar, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

<sup>3,4</sup>Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

Considering the decrease in conventional resources and increase in environmental pollution, awareness and related concerns, it is anticipated that the use of electric vehicles (EV) will rise globally in the medium term as a solution in the context of decision making process of many countries, to achieve their environmental targets. This paper presents a case study about the recent researches and projections on electric vehicles and also potential impacts of EV charging on the electricity distribution network. The current EV market situation, advances about range, battery and charging issues, the current situation in Turkey were researched. Results from the presented studies indicate that EV sales penetration rates calculations were made under 2 different charge scenario distributions. The analysis results of them that especially in 17:00-23:00 hours when electricity usage reached peak level, EV charging creates a serious fluctuation and load profile in terms of electricity distribution network. In addition to these, the relationship between the energy quality and the EV charging stations were analyzed and their effects on the electricity network were investigated.

**FAULT DETECTION AND CONTROL RECONFIGURATION OF WIND POWER PLANTS**

**Paper ID-1461**

**A PAPER PRESENTED BY:DR. PAKKIRIAH. B<sup>1</sup> , PAUL RATNAKANTH. PALLAM**

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VADDESARAM, AP, INDIA.

<sup>2</sup>PG STUDENT, DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESARAM, AP,  
INDIA.

**Abstract**

In this paper we developed a new Active Fault Tolerant Control algorithm That is able to stabilize the Wind Turbine under actuator fault, The main idea is to use a observers redundancy to generate a residual set for an effective detection and multiple controls scheme which allow to switch automatically the control to the adequate one in the presence of the fault to maintain the continuity of the energy production with the highest performance possible. For the fault detection we used a bank of two observers the Kalman filter and Sliding mode observer, A method using In the healthy mode is Linear Quadratic Gaussian (LQG) control methodology shows good performance, optimal control and robust-ness in controller design and Sliding Mode control when fault occur. To validate the proposed method, the simulation has been carried out using MATLAB script and the results are presented.

**IMPROVEMENT OF THE INDIRECT FIELD ORIENTED CONTROL FOR IM DRIVES USING FUZZY CONTROLLERS**

**Paper ID-1462**

**A PAPER PRESENTED BY: J. RAJESH REDDY , A. PANDIAN**

DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWAREM, AP, INDIA.

**Abstract:** Transportation is one of the most sectors requiring the use of a clean energy. This has made design of electric and hybrid vehicles a particular challenge. Several machines are intended for this purpose according to different criteria such as the efficiency, power density, robustness, reliability, cost, etc. In order to ensure good energy management, the mastery of the control is requested. It is essential to take into account all the different disturbances, especially the parametric variations of the motor. In this paper, the control of Induction Machine designed for hybrid electric vehicles is presented. Focus is made on the indirect stator flux oriented control by using the conventional and the fuzzy controllers. A spectral analysis of the torque and the current will be highlighted in order to clarify the advantage of the use of fuzzy logic.

**MAXIMIZING DG PENETRATION WITH AN ANALYTICAL APPROACH AND ARTIFICIAL BEE COLONY  
ALGORITHM**

**Paper ID-1463**

**A PAPER PRESENTED BY: SRIKANTH GOUD. B<sup>1</sup>, B. LOVESWARA RAO<sup>2</sup>**

<sup>1</sup>Research Scholar, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

<sup>2</sup>Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

Renewable source based energy generation become a solution in today's power system to provide unlimited clean energy as well as reducing carbon emission. Distributed generators are significant applicant for a network that will help to supply the ascending energy demand with clean energy. As distribution network operators intend to increase distributed generation penetration they need to investigate and find solution how to operate the system reliable and safely considering the negative effects of them. It has significant importance to be aware of the penetration capacity of system for future planning and investments. In this paper, a beginning of a study is presented to show the effects of distributed generator penetration level in a distribution system. An analytical approach is introduced regarding total power loss of a distributed generator penetrated system and a heuristic method is used to make further analysis.

**A STUDY OF FUEL CELL SCHEDULING EFFECT ON LOCAL ENERGY MARKETS WITH HETEROGENEOUS  
RENEWABLE SOURCES**

**Paper ID-1464**

**A PAPER PRESENTED BY: POTLA LINGA REDDY**

Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

The study presented in this paper aims to show the impact of introducing a priority-based internal power flow management system on the local energy market of prosumers with solar panels, fuels cells and batteries. The community used for the study is based on the Open Energy Systems (OES), in which 19 autonomous subsystems, equipped with batteries, solar panels and AC grid connection are interconnected via a DC power bus. For the simulation purposes, fuel cell, modeled after Ene-Farm, is added to the original configuration. Each standalone system has internal, priority-based, agent, capable of scheduling the operating hours of the fuels cell to maximize the utilization of the generation and minimize curtailment. The energy market is based on a simplified version of the Zaraba, a continuous double auction algorithm used by the Japanese Stock Exchange, in which prosumer can submit a bid for a future timeslot. The preliminary numerical evaluation is based on the results from several simulations using different versions of the internal management system.



**FEASIBLE ISLANDING OPERATION OF ELECTRIC NETWORKS WITH LARGE PENETRATION OF RENEWABLE  
ENERGY SOURCES CONSIDERING SECURITY CONSTRAINTS**

**Paper ID-1465**

**A PAPER PRESENTED BY: S SOWMYA<sup>1</sup>, V K SAI SRI VASTHAVA<sup>2</sup>, T VIJAY MUNI<sup>3</sup>**

<sup>1,2</sup>UG Student, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

<sup>3</sup>Asst. Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**ABSTRACT:**

The high penetration of Renewable Energy Sources into electric networks shows new perspectives for the network's management: among others, exploiting them as resources for network's security in emergency situations. The paper focuses on the frequency stability of a portion of the grid when it remains islanded following a major fault. It proposes an optimization algorithm that considers the frequency reaction of the relevant components and minimizes the total costs of their shedding. The algorithm predicts the final frequency of the island and the active power profiles of the remaining generators and demands. It is formulated as a Mixed-Integer Non-Linear Programming problem and the high computation time due to a large-size problem is mitigated through a simplified linear version of the model that filters the integer variables. The algorithm is designed to operate on-line and preventively compute the optimal shedding actions to be engaged when islanding occurs. The algorithm is validated for a typical distribution grid: the minimum amount of shedding actions is obtained while the most frequency reactive resources are maintained in operation to assure a feasible frequency. Finally, time-domain simulations show that the optimal solution corresponds to the one at the end of the network's transients following the islanding.

**RELIABILITY ENHANCEMENT IN POWER NETWORKS UNDER UNCERTAINTY FROM DISTRIBUTED ENERGY  
RESOURCES**

**Paper ID-1466**

**A PAPER PRESENTED BY: MOTAPARTHI NAGARAJU , MALLIGUNTA KIRAN KUMAR**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**ABSTRACT:**

This paper presents an integrated approach for assessing the impact that distributed energy resources (DERs), including intermittent photovoltaic (PV) generation, might have on the reliability performance of power networks. A test distribution system, based on a typical urban MV and LV networks in the UK, is modelled and used to investigate potential benefits of the local renewable generation, demand-manageable loads and coordinated energy storage. The conventional Monte Carlo method is modified to include time-variation of electricity demand profiles and failure rates of network components. Additionally, a theoretical interruption model is employed to assess more accurately the moment in time when interruptions to electricity customers are likely to occur. Accordingly, the impact of the spatio-temporal variation of DERs on reliability performance is quantified in terms of the effect of network outages. The potential benefits from smart grid functionalities are assessed through both system- and customer-oriented reliability indices, with special attention to energy not supplied to customers, as well as frequency and duration of supply interruptions. The paper also discusses deployment of an intelligent energy management system to control local energy generation-storage-demand resources that can resolve uncertainties in renewable-based generation and ensure highly reliable and continuous supply to all connected customers.

**IGNITION OF WELDING ARC AND UV ACTINIC HAZARD EVALUATION**

**Paper ID-1467**

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**ABSTRACT:**

Welding arcs emit strong ultraviolet (UV) radiation, which could pose serious health risks for skin and eyes. According to Directive 2006/25/EC, UV hazard evaluation has to be performed in the working environment. The measurement of welding arc ignition radiation is a difficult task. This article describes the effort made to determine actinic radiant exposure levels during welding arc ignition in the controlled environment of a welding laboratory. A new method of UV actinic hazard evaluation from welding arc ignition radiation using a CCD spectroradiometer combined with a photometer is presented. The hazard of UV emitted in pulsed metal active gas welding (MAG-P) of construction steel is described. The duration of ignition peak in the study was in the range of 9–15 ms. The actinic radiant exposure during arc ignition over aversion response time was in the range of 0.26–1.12 J/m<sup>2</sup>. The daily exposure time can easily exceed the permissible exposure time obtained in our study, i.e., 13–34 s, which means that UV radiation from MAG-P arc welding is hazardous for workers in the vicinity of the welding arc. The measurement method presented in the article enables determination of radiant exposure of arc ignition radiation.

**DYNAMIC SIMULATION MODEL OF TRANS-CRITICAL CARBON DIOXIDE HEAT PUMP APPLICATION FOR  
BOOSTING LOW TEMPERATURE DISTRIBUTION NETWORKS IN DWELLINGS**

**Paper ID-1468**

**A paper presented by: Sunitha Kundurthi<sup>1</sup>, Surya Teja Padi<sup>2</sup>, Y Srinivasa Rao<sup>3</sup>**

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**ABSTRACT:**

This research investigates the role of new hybrid energy system applications for developing a new plant refurbishment strategy to deploy small scale smart energy systems. This work deals with a dynamic simulation of trans-critical carbon dioxide heat pump application for boosting low temperature distribution networks to share heat for dwellings. Heat pumps provide high temperature heat to use the traditional emission systems. The new plant layout consists of an air source heat pump, four trans-critical carbon dioxide heat pumps (CO<sub>2</sub>-HPs), photovoltaic arrays, and a combined heat and power (CHP) for both domestic hot water production and electricity to partially drive the heat pumps. Furthermore, electric storage devices adoption has been evaluated. That layout has been compared to the traditional one based on separated generation systems using several energy performance indicators. Additionally, a sensitivity analysis on the primary energy saving, primary fossil energy consumptions, renewable energy fraction and renewable heat, with changes in building power to heat ratios, has been carried out. Obtained results highlighted that using the hybrid system with storage device it is possible to get a saving of 50% approximately. Consequently, CO<sub>2</sub>-HPs and hybrid systems adoption could be a viable option to achieve Near Zero Energy Building (NZEB) qualification.

**ANALYSIS OF THE SENSITIVITY OF EXTENDED KALMAN FILTER-BASED INERTIA ESTIMATION METHOD TO  
THE ASSUMED TIME OF DISTURBANCE**

**Paper ID-1469**

**A PAPER PRESENTED BY: VINAY KUMAR MANGALAGIRI<sup>1</sup>, NIKHIL S. GUJAR<sup>2</sup>, P. SRINIVASA VARMA<sup>3</sup>**  
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**ABSTRACT:**

The frequency behavior of an electric power system right after a power imbalance is determined by its inertia constant. The current shift in generation mix towards renewable energy sources is leading to a smaller and more variable inertia, thereby compromising the frequency stability of modern grids. Therefore, real-time inertia estimation methods would be beneficial for grid operators, as their situational awareness would be enhanced. This paper focuses on an inertia estimation method specifically tailored for synchronous generators, based on the extended Kalman filter (EKF). Such a method should be started at the time of disturbance, which must be estimated accurately, otherwise additional errors could be introduced in the inertia estimation process. In this paper, the sensitivity of the EKF-based inertia estimation method to the assumed time of disturbance is analyzed. It is shown that such sensitivity is influenced by the initially assumed inertia constant, the use time of the filter and by the time required for primary frequency regulation to be activated.

**A SINGLE INTERSECTION COOPERATIVE-COMPETITIVE PARADIGM IN REAL TIME TRAFFIC SIGNAL  
SETTINGS BASED ON FLOATING CAR DATA**

**Paper ID-1470**

**A PAPER PRESENTED BY: A J SAI KRISHNA<sup>1</sup>, J SOMLAL<sup>2</sup>**

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INDIA

**ABSTRACT:**

New technologies such as “connected” and “autonomous” vehicles are going to change the future of traffic signal control and management and possibly will introduce new traffic signal systems that will be based on floating car data (FCD). The use of floating car data to regulate traffic signal systems, in real time, has the potential for an increased sustainability of transportation in terms of energy efficiency, traffic safety and environmental issues. However, research has never explored how not “connected” vehicles would benefit by the implementation of such systems. This paper explores the use of floating car data to regulate traffic signal systems in real-time in a single intersection and in terms of cooperative-competitive paradigm between “connected” vehicles and conventional vehicles. In a dedicated laboratory, developed for testing regulation algorithms, results show that “invisible vehicles” for the system (which are not “connected”) in most simulated cases also benefit when real time traffic signal settings based on floating car data are introduced. Moreover, the study estimates the energy and air quality impacts of a single intersection signal regulation by evaluating fuel consumption and pollutant emissions. Specifically, the study demonstrates that significant improvements in air quality are possible with the introduction of FCD regulated traffic signals.

**RENEWABLE ENERGY SOURCES AND BATTERY FORECASTING EFFECTS IN SMART POWER SYSTEM  
PERFORMANCE**

**Paper ID-1471**

**A PAPER PRESENTED BY: DINAKARYEDDU<sup>1</sup>, SARADA KOTA<sup>2</sup>, PAKKIRIAH BHUPANAPATI<sup>3</sup>**

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VADDESWAREM, AP, INDIA

**ABSTRACT**

In This Study, The Influence Of Using Acid Batteries As Part Of Green Energy Sources, Such As Wind And Solar Electric Power Generators, Is Investigated. First, The Power System Is Simulated In The Presence Of A Lead–Acid Battery, With An Independent Solar System And Wind Power Generator. In The Next Step, In Order To Estimate The Output Power Of The Solar And Wind Resources, A Novel Forecast Model Is Proposed. Then, The Forecasting Task Is Carried Out Considering The Conditions Related To The State Of Charge (Soc) Of The Batteries. The Optimization Algorithm Used In This Model Is Honey Bee Mating Optimization (Hbmo), Which Operates Based On Selecting The Best Candidates And Optimization Of The Prediction Problem. Using This Algorithm, The Soc Of The Batteries Will Be In An Appropriate Range, And The Number Of On-Or-Off Switching's Of The Wind Turbines And Photovoltaic (Pv) Modules Will Be Reduced. In The Proposed Method, The Appropriate Capacity For The Soc Of The Batteries Is Chosen, And The Number Of Battery On/Off Switches Connected To The Renewable Energy Sources Is Reduced. Finally, In Order To Validate The Proposed Method, The Results Are Compared With Several Other Methods.

**A CURRENT ASSESSMENT OF EFFECTS OF ELECTRICITY MARKET LIBERALIZATION ON ELECTRICITY  
CONSUMER RIGHTS**

**Paper ID-1472**

**A PAPER PRESENTED BY: MANCHALLA HARSHINI BHARGAVI<sup>1</sup>, JARUPULA SOMLAL<sup>2</sup>**

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INDIA

**Abstract**

Central governments have been experiencing difficulties in financing increased electricity grid investments. In recent years, the grids, in which financial problems are experienced, are rapidly liberalized to supply affordable, continuous and high quality energy to consumers. The liberalization of the distribution grid have been completed in the last decade. In this study, a current review of consumer rights after the liberalization of Turkey's distribution grid is carried out. Although some improvements in supply continuity after liberalization has been shown, the supply continuity performance of distribution grid is not at the desired level considering economic performance, size and development. Objectives within the liberalization of the distribution grid can only be achieved through cooperation with regulatory authority and private companies. In this respect, private companies should take necessary measures and the regulatory authority should revises existing regulations considering characteristics of the distribution companies and make necessary audits.



**COMPARATIVE PARAMETER ESTIMATION OF SINGLE DIODE PV-CELL MODEL BY USING SINE-  
COSINE ALGORITHM AND WHALE OPTIMIZATION ALGORITHM**

**Paper ID-1473**

**A PAPER PRESENTED BY:K. UMADEVI<sup>1</sup>, S.V.N.L. LALITHA<sup>2</sup>**

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**Abstract:**

The share of photovoltaic energy systems in electricity production is increasing day by day. Photovoltaic systems are typically modeled as PV-cell circuit when using in power system analysis. The selection of the parameters used in the model is crucial because how close the model outputs are to reality depends on true estimation of these parameters. These parameters are also important for efficiency and maximum power tracking. Due to the increase in electricity generation with solar energy, the problem of estimation of these parameters has become a widely studied subject in recent years. In this study, the parameters of PV-cell are estimated using Whale Optimization Algorithm (WOA) and Sine-Cosine Algorithm (SCA) and compared with the related literature.

**CONTROL ALGORITHMS AND APPLICATION SOFTWARE OF ELECTRIC DRIVE FOR  
REMOTELY CONTROLLED VEHICLE**

**Paper ID-1474**

**A PAPER PRESENTED BY: SAI KRISHNA REDDY, S. RAVI TEJA**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

This paper concerns the proposal of software of electronic drive system 4WD of electric vehicle DEMOCAR. Structure of electronic system and design of parts of 4WD are described. Article is mainly focused on description of control algorithm of 4WD as well as differential and anti-slide system. Co-operation and communication between systems, especially brakes system and steering are important part as well. Last part includes safety solutions. Additionally, this paper includes implementation of superior control unit. Algorithms include communication, safety and computing part. Communication between DCU and other ECUs is based on CAN-Bus, communication between DCU and drive units is based on CANopen. Result of this thesis is the superior control unit capable of controlling four individual drive units. All functionality and parts of the application software were verification using driving test.

**AN ITERATIVE IMAGE INPAINTING METHOD BASED ON SIMILARITY OF PIXELS VALUES**

**Paper ID-1475**

**A paper presented by:Sk.Moulali , K. Siva Reddy**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

Image inpainting is a process of completion of missing places by using other undamaged sections of the image or removal of unwanted objects of the image. In this study, we propose a novel image inpainting method. This method constitutes an essential place in image processing. This proposed method fills the corrupted area by using similarity of the boundary pixels values around that corrupted regions in every iteration step. Afterwards, to evaluate image inpainting quality of the proposed method, we use Peak Signal-to-Noise Ratio (PSNR) and Structural Similarity (SSIM) metrics and present some visual results. The acquired results show that our proposed inpainting method gives an outstanding performance to fill the corrupted areas and to remove objects. We also discuss the need for further research.

**EFFECT OF SATURATION ON FIELD ORIENTED CONTROL OF THE NEW DESIGNED RELUCTANCE  
SYNCHRONOUS MOTOR**

**Paper ID-1476**

**A PAPER PRESENTED BY: Y. RAMACHANDRA<sup>1</sup>, M. AKHILESHWAR<sup>2</sup>, A. PANDIAN<sup>3</sup>, K. SUBBARAO<sup>4</sup>**

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INDIA

**Abstract:**In this paper the effect of saturation on torque production of a reluctance synchronous motor (RSM), which was originally built as an induction motor (IM), is investigated. The rotor was replaced with new one, designed as synchronous reluctance cageless rotor with barriers, the shape and number of which were optimized to maximize the reluctance ratio. The torque measurement was done while the RSM was fed by frequency converter controlled by a microcontroller with closed loop field oriented control strategy to find out how saturation effects the developed torque at various values of the currents and speeds. It is shown how the load angle at which the maximum torque was achieved is changed. It was found out that the load angle was shifted to higher values depending on the speed of operation.

**ELECTRICAL MODELLING OF A DC RAILWAY SYSTEM WITH MULTIPLE TRAINS**

**Paper ID-1477**

**A paper presented by: Y. Srinivasa Rao , P. SrinivasaVarma**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**ABSTRACT:**

Electrical modelling of rail tracks with multiple running trains is complex due to the difficulties in solving the power flow. The train positions, speed and acceleration are constantly varying resulting in a nonlinear system. In this work, a method is proposed for modelling DC electric railways to support power flow analysis of a simulated metro train service. The method exploits the MathWorks simulation tool Simscape, using it to model the mechanical and electrical characteristics of the rail track system. The model can be simulated to provide voltages at any position in the track and additionally, the voltages seen by any train. The model includes regenerative braking on trains, this is demonstrated to cause overvoltage in the feeding line if it is higher than the power demand of the other trains at that time. Braking resistors are used to protect the network from overvoltage by burning the excess energy. Through the implementation of Energy Storage Systems (ESSs), it will be possible to improve the energy efficiency and remove timetabling restrictions of electric railways by effectively controlling the rail track voltage. The paper proposes several methods to validate the model.

**INTERNET OF THINGS PLATFORM FOR ENERGY MANAGEMENT IN MULTI-MICROGRID SYSTEM TO IMPROVE  
NEUTRAL CURRENT COMPENSATION**

**Paper ID-1478**

**A paper presented by: Kiran Babu V<sup>1</sup>, Srinivasa Varma P<sup>2</sup>**

<sup>1</sup>Research Scholar, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India

<sup>2</sup>Assoc. Professor, Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram,  
AP, India

**ABSTRACT**

In this paper, an Internet of Things (IoT) platform is proposed for Multi-Microgrid (MMG) system to improve unbalance compensation functionality employing three-phase four-leg (3P-4L) voltage source inverters (VSIs). The two level communication system connects the MMG system, implemented in Power System Computer Aided Design (PSCAD), to the cloud server. The local communication level utilizes Modbus Transmission Control Protocol/Internet Protocol (TCP/IP) and Message Queuing Telemetry Transport (MQTT) is used as the protocol for global communication level. A communication operation algorithm is developed to manage the communication operation under various communication failure scenarios. To test the communicationsystem, it is implemented on an experimental testbed to investigate its functionality for MMG neutral current compensation (NCC). To compensate the neutral current in MMG, a dynamic NCC algorithm is proposed, which enables the MGs to further improve the NCC by sharing their data using the IoT platform. The performance of the control and communication system using dynamic NCC is compared with the fixed capacity NCC for unbalance compensation under different communication failure conditions. The impact of the communication system performance on the NCC sharing is the focus of this research. The results show that the proposed system provides better neutral current compensation and phase balancing in case of MMG operation by sharing the data effectively even if the communication system is failing partially

**A PASSENGER-ORIENTED OPTIMIZATION MODEL FOR IMPLEMENTING ENERGY-SAVING STRATEGIES IN  
RAILWAY CONTEXTS**

**Paper ID-1479**

**A paper presented by:**RBR Prakash, Y Srinivasa Rao  
Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**ABSTRACT:**

Rail And Metro Systems Are Characterized By High-Performing And Environmentally Friendly Features That Make Them A Crucial Factor For Driving Modal Split Towards Public Transport Modes, Thus Reducing Private Car Use And Related Externalities (Such As Air And Noise Pollution, Traffic Congestion And Accidents). Within This Framework, The Implementation Of Suitable Energy-Saving Policies, Allowing To Reduce Energy Consumption, But, At The Same Time, Preserving Timetable Stability And Passengers' Satisfaction, May Turn Out To Be Imperative. In Particular, This Study Aims To Develop An Analytical Framework For Properly Supporting The Implementation Of Eco-Driving Strategies In A Passenger-Oriented Perspective. An Application To A Rail Line In Southern Italy Is Performed So As To Demonstrate The Usefulness Of The Proposed Approach In Determining The Optimal Compromise Between Energy Reductions And Travel Time Increases.

**PROTECTION COORDINATION OF PROPERLY SIZED AND PLACED DISTRIBUTED  
GENERATIONS—METHODS, APPLICATIONS AND FUTURE SCOPE**

**Paper ID-1480**

**A paper presented by:G Swapna, K Sarada**

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**ABSTRACT**

:The radial distribution networks are designed for unidirectional power flows and are passive in nature. However, with the penetration of Distributed Generation (DG), the power flow becomes bidirectional and the network becomes active. The integration of DGs into distribution network creates many issues with: system stability, protection coordination, power quality, islanding, proper placement and sizing etc. Among these issues, the two most significant are optimal sizing and placement of DGs and their protection coordination in utility network. The proper coordination of relays with high penetration of DGs placed at optimal location increases the availability and reliability of the network during abnormal operating conditions. This research addresses most of the available methods for efficient sizing and placement of DGs in distribution system (numerical, analytical and heuristic) as well as the developed protection coordination techniques for utility networks in the presence of DGs (Artificial Intelligence (AI), adaptive and non-adaptive, multi-agent, hybrid). This paper indicates the possible research gaps and highlights the applications possibilities and methods' limitations in the area of DGs.



**APPLICATION OF ENVIRONMENT NOISE CLASSIFICATION TOWARDS SOUND  
RECOGNITION FOR COCHLEAR IMPLANT USERS**

**Paper ID-1481**

**A paper presented by: D Sudha, S Raja Sekhar**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

The ability of cochlear implant (CI) users in speech recognition decreases significantly in background noise. Various approaches have been proposed that optimize algorithms for specifically determined noisy environments with the ability to restore speech for cochlear implant users. This paper presents an approach to classifying different noise environments in our daily lives such as factory floor, jet cockpit, babble noise and etc. The noise classification system described here can be used to recognize different background noises and then optimize the coding strategies for hearing aids and cochlear implant devices. Seven types of noise environments are selected as the training data, and noise segments randomly cut from different noise recordings will be used as the test data. Classifiers based on Gaussian Mixture Models and Bayesian classifiers are developed and evaluated as well as KNN clustering. Features are extracted using MFCC feature extraction. In this paper, we aim to describe the automated solution for noise reduction in known types of noisy environments, and implement models in cochlear implant device. It is shown that training the classifier with 80% of the data resulted in 100% classification performance of all classes except the babble noise. By employing feature sub selection, the performance of the classifier was examined for every class using each single feature, and the role of each of the features in classifying each class was quantified. It was also found that by using only two of the features 100% performance could be enhanced for all classes except two of them.

**60 GHZ BEAM-STEERING ANTENNA ARRAY USING LIQUID CRYSTAL PHASE SHIFTER**

**Paper ID-1482**

**A PAPER PRESENTED BY: M N CHAITANYA, D SESHU REDDY, D NARSIMHA RAO**  
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**Abstract:**

The applications of communication devices have extended widely especially with the revolution of 5G systems. The rapid progress in the material science and electronic technology, makes it possible to design tunable and flexible reconfigurable wireless devices. In this paper, the anisotropic properties of liquid crystals in their nematic phase are exploited for designing tunable wireless devices at 60GHz millimeter wave band. Two different design approaches for 60GHz are presented, a liquid crystal tunable resonator, and beam-steering slotted patch antenna array. Simulations indicate around 5.04% of continuous frequency tuning with low insertion loss, with antenna array ability to steer its beam in the E-plane by a maximum of 20°.

**DISCRIMINATION OF MAGNETIC INRUSH CURRENT FROM FAULT CURRENT IN  
TRANSFORMER- A NEW APPROACH**

**Paper ID-1483**

**A paper presented by: S.V.N.L. Lalitha, M N Chaitanya**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

It is a challenge for the power engineers all around the globe to find a fast and accurate method of discriminating magnetic inrush currents from fault currents in Power Transformers. Though the previously known inrush current detection techniques are able to do it but they are less reliable and slow to respond due to use of filter. A new approach of discriminating inrush current from fault current in a fast and precise manner is developed. Based on the asymmetry of inrush current waveform, a unique criteria for discrimination is established. MATLAB coding is developed to model a transformer for the analysis. Various switching instants on the supply voltage waveform have been considered at intervals of 900 from 00 to 3600 with different residual flux in magnetic core.

**DESIGN OF LOW VOLTAGE PANEL**

**Paper ID-1484**

**A paper presented by:K. V. Shiva Reddy<sup>1</sup> , B. NavyaSree<sup>2</sup>**

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**Abstract:**

Low voltage (LV) panels are most common across all the industries and one of the more common special requirement which need to be designed in accordance with safety standards prevailing. An electrical panel is that the combination of protection and switch devices assembled in one or a lot of adjacent compartments. A panel is made by adding compartments as per the specified form of construction, that is termed "enclosure" (with support and mechanical protection functions for the various parts enclosed), and therefore the electrical instrumentality, represent by the equipment, the interior affiliations and therefore the incoming and outgoing feeders for the connection to the installation. This paper is mainly on the lv switch gears.

**DUAL ACTIVE BRIDGE BASED BATTERY CHARGER FOR RENEWABLE ENERGY  
APPLICATIONS**

**Paper ID-1485**

**A paper presented by: B Jyothi , T Teja Sreenu , K NarsimhaRaju,**  
Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract.**

Energy storage is required along with the renewable energy sources to provide continuous power to the grid and to improve the dynamic performance of the system during extreme weather conditions. In this paper, a bi-directional battery charger based on Dual Active Bridge (DAB) suitable for Renewable energy applications is presented. The transformer used in the DAB provides isolation between the DC Link and the Battery. A phase shift control is used for the power control through the Battery charger. This paper explains the operation, control philosophy, and power flow through DAB during charging and discharging modes of operation. Simulation results are presented to explain the operation and dynamic performance of the system.

**A COMPARATIVE STUDY AND EXPERIMENTAL INVESTIGATION OF CONTINUOUS AND  
DISCONTINUOUS PWM ALGORITHMS FOR VSI FED INDUCTION MOTOR DRIVE**

**Paper ID-1486**

**A paper presented by: S Ravi Teja , T Teja Sreenu , M Kirankumar**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

This paper investigates and compares various continuous and discontinuous Pulsewidth modulation algorithms for two-level three-phase voltage source Inverter. In SPWM, variable AC output voltage of inverter is produced by comparing a sinusoidal reference signal with triangular signal, whereas Conventional SVPWM uses complex voltage vector for PWM control. It is observed that SVPWM algorithm makes it possible to the fundamental output voltage to increase 15.5% as compared with SPWM. Moreover Conventional SVPWM requires sector information and angle for calculating gating sequence of the inverter, a simplified SVPWM algorithm is also described, which does not require sector and angle calculation. However it is observed that continuous PWM algorithm gives more switching losses and high harmonic distortion at higher modulation index. This paper presents simplified discontinuous Pulse width modulation methods (DPWM) for two-level three-phase voltage source inverters. In the proposed DPWM a zero sequence signal is injected in sinusoidal reference signal to generate different modulators with easier implementation. The simulation and experimental results show the superiority of this algorithm as compared with conventional PWM algorithms.

**ENERGY SAVINGS USING VFDS IN A CENTRIFUGAL PUMPING SYSTEM**

**Paper ID-1487**

**A paper presented by: M Sai Krishna reddy , Sk Moulali , K NarsinhaRaju**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

Energy is the fundamental need to perform any process in the world. Energy insufficiency is the major challenge endured all over the world till date. Pumping system contributes about 30 % of the currently installed utilities. Hence, by enhancing the pumping system energy efficiency, significant energy savings can be achieved. Also the affinity laws of centrifugal loads states reduction in speed by 50% causes reduction in power consumption up to 80%. In recent decades, Variable Frequency Drives (VFDs) are preferred to control the speed of the pumps.

**REDUCED ORDER MODEL OF INDUCTION MOTOR IN SYNCHRONOUSLY ROTATING  
REFERENCE FRAME**

**Paper ID-1488**

**A paper presented by: B Loveswara Rao , SVNL Lalitha**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

This paper gives information about the comparing of the fifth and third order model of induction machine and to give out the best suited model of the induction machines for the required application. The stability of these machines coupled with the inverters i.e three phase inverters are studied and the results are illustrated. Also by comparing various characteristic of the both models of machines. The model with much advantages are figured out and applied for the needs of users. These models are designed in the MATLAB environment and the results are simulated. The model comprises of inverter of three phase and the induction machine which is to be simulated in the MATLAB platform.



**SIMULATION AND ANALYSIS OF MICROGRID POWER FLOW WITH DISTRIBUTED ENERGY  
RESOURCES USING MATLAB/SIMULINK**

**Paper ID-1450**

**A paper presented by: D Kalyan , P Siva Sankar , J Somlal**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

Our world has witnessed a rapid transformation in the field of electrical generation, transmission and distribution. We have been constantly developing and upgrading our technology to make the system more economically efficient. Currently, we face an acute shortage of energy resources due to over consumption by the industries worldwide. This has compelled experts to look for alternatives to fossil fuels and other conventional sources of energy to produce energy in a more sustainable manner. The concept of Microgrid has gained popularity over the years and has become a common sight all over the world because of the ability of a Microgrid to provide power to a localized section without being dependent on conventional resources. This project focuses on development of such an AC hybrid Microgrid which receives power from DERs such as PV array alongside a Battery storage System and also uses a Emergency Diesel Generator System and an Online UPS system to provide power to pre-defined loads under different conditions. This paper focuses on the power flow to the loads under two main modes of operation- On Grid and Off Grid mode of operation and studies the Microgrid under different states as mentioned in the following pages. The fundamental objective of the paper is to design an efficient Microgrid model such that it can sustain the multiple loads simultaneously under all conditions.

**SIMULATION DEVELOPMENT AND ANALYSIS OF A MICROGRID NETWORK TO DERIVE  
OPTIMUM SIZING OF A VOLTAGE Source for a BESS**

**Paper ID-1489**

**A paper presented by: D Sudha , G Swapna , RBR Prakash**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

The main challenge in micro grid with Distributed Energy Resources (DER) is managing intermittent nature of renewable energy sources like solar and wind. This can be tackled by integrating, a Battery Energy Storage System (BESS) into the microgrid network. In general, a BESS is a grid-tied system and having fast power adjustment capability. But stand-alone BESS cannot operate in the absence of local Voltage Source (VS) as reference in the network. To ensure reliable operation of a microgrid system during utility grid outage or non-availability of intermittent renewable energy sources, it is important to operate BESS with local VS and dispatch the stored energy. This paper discusses the analytical methodology that can be adopted for identifying the most suitable device which can act as a reference VS for the BESS, and provide the reference voltage and frequency in absence of the main grid. The outcome of this analysis identifies a suitable device as a local reference VS for the BESS and defines optimum sizing rules based on the network characteristics. In the event of grid outage, the BESS takes less than 1 sec to ramp up completely and start feeding loads. Thus, it is critical for the new reference VS to feed and secure non-sheddable loads on its own during that interval. A detailed Matlab/Simulink simulation and analytical study was conducted and it was concluded that, an Uninterruptible Power Supply (UPS) with a 35-45% kVA size of that of the BESS and an overload capacity of 150-200% can be chosen as the reference VS for the BESS.

**GENETIC ALGORITHM BASED MULTI-OBJECTIVE DESIGN OPTIMIZATION OF RADIAL  
FLUX PMBLDC MOTOR**

**Paper ID-1490**

**A paper presented by: D Seshi Reddy , RBR Prakash , Y srinivasa Rao**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

This paper presents Genetic Algorithm based multi-objective optimal design procedure of radial flux permanent magnet brushless DC (PMBLDC) motor. Three fitness functions are taken into consideration i.e. efficiency, weight and combination of both. The first two fitness functions are single-objective and the third one is multiobjective. Multi-objective function is combinational function which incorporates both efficiency and weight of the motor in to single fitness function. Motor design is optimized using these three functions separately. Air gap flux density ( $B_g$ ), torque to rotor volume ratio ( $K_{trv}$ ), length of air gap ( $l_g$ ), aspect ratio ( $A_r$ ) and split ratio ( $S_r$ ) are selected as design variables. At the end, FEM (Finite Element Method) is used to validate optimized design obtained from the algorithm.

**ROTOR SIDE CONVERTER CONTROL OF GRID CONNECTED DFIG**

**Paper ID-1491**

**A paper presented by: B Jyothi , M srikanth , A Pandian**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

This work presents control scheme for the rotor side converter (RSC) of a doubly fed induction generator (DFIG) connected to the electric power grid to capitalize upon the existing combined vector and direct power control (CVDPC) scheme. This is achieved by introducing space vector modulated (SVM) switching and consequent implementation of ANFIS controller. The resulting scheme, ANFIS-SVM-CVDPC is compared with CVDPC and the performance and control effectiveness of both the schemes is analyzed by simulation in terms of Dc link voltage, rotor speed, active and reactive power generation of the DFIG with respect to steady-state and variable wind conditions. Simulation using MATLAB/Simulink conducted on a grid-connected 9-MW DFIG-based wind farm and the consequent analysis confirm the improved performance of ANFIS-SVM-CVDPC over CVDPC.

**DATA TRANSMISSION IN SHIPS BASED ON LIGHT FIDELITY**

**Paper ID-1492**

**A paper presented by: M. Srikanth , K Sarada**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

Light Fidelity (LiFi) is a technology based on Visible Light Communication(VLC). VLC using the Light Emitting Diode (LED) will become an appealing alternative for the present radio frequency communication. In this paper we proposed a safe and cost efficient data transmission system in ships using VLC in the place of radio frequency communication and a repeater system using which the distance of transmission can be increased. LiFi uses rapid pulses for data transmission. The LEDs will transfer data in high intensity that it will be difficult for human eyes to follow. The proposed scheme will be an appealing solution for the wireless data transmission in ships in a safer manner, especially in oil tankers and chemical tankers. It will be cost efficient and high speed. The reliability of the system is much more than the present system. It could be extended to places such as hazardous zone, hospitals, radio frequency free zones, etc. The result shows that the data transmission is executed in the system with the LiFi transceiver.

**A 1.65-V 176-mW 104-dB CONTINUOUS TIME DELTA-SIGMA MODULATOR FOR SENSOR APPLICATIONS**

**Paper ID-1493**

**A paper presented by: D Kalyan , S Ravi Teja , M N chaitanya**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

This paper presents a low-noise single-loop third-order single-bit continuous-time (CT) Delta-Sigma modulator for sensor applications. The modulator employs the CIFF-B structure and chopping technique to reduce the power consumption and low-frequency noise. The FIR feedback DAC is adopted to reduce the sensitivity of CT  $\Delta\Sigma$  modulators to clock jitter, and the method of moments is used to design the coefficients of loop filter. The chopping frequency is also designed carefully to avoid the noise aliasing effect, and modulator coefficients and circuit implementation have been optimized for low power. The modulator, implemented in a 150nm CMOS technology with a core area of 0.48mm<sup>2</sup>, achieves a 107dB peak SNR and a 104dB peak SNDR over a 1kHz signal bandwidth. The power consumption is 176 $\mu$ W at 1.65V supply voltage.

**SENSITIVITY OF MICROWAVE POWER TRANSISTORS TO LOW FREQUENCY IMPEDANCE VARIATIONS**

**Paper ID-1494**

**A PAPER PRESENTED BY: P SRINIVASA VARMA , M SRIKANTH, D SESHI REDDY**

**DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWARAM, AP, INDIA.**

**Abstract**

Low frequency impedance variations have been identified as having an adverse effect on the linearity performance of microwave power transistors. The presentation of frequency independent and broadband low frequency impedances across the wide modulation bandwidth is of paramount significance for robust characterization of microwave power transistors for future wireless communication systems. This paper presents a refined active loadpull measurement system to allow the precise independent control of all the significant low frequency components generated as a result of complex modulated excitation. The investigations are carried out on a 10W pHEMT microwave power transistor when driven to deliver a peak envelope power of approximately 39.7dBm under 9-tone complex modulated stimulus.

**A MONOLITHIC CMOS HALL SWITCH SENSOR SYSTEM WITH HIGH PRECISION AND LOW POWER  
CONSUMPTION**

**Paper ID-1495**

**A PAPER PRESENTED BY: K P PRASAD RAO , T VIJAYA MUNI , K SARADA**  
DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWARAM, AP, INDIA.

**Abstract:**

A monolithic CMOS Hall switch sensor which consists of a square-shaped Hall plate and a novel signal conditioner is presented. The proposed signal conditioner employs dynamic offset cancellation technique together with spinning current technique to eliminate offset and low frequency  $1/f$  noise, which improves both precision and power consumption of the sensor system. The dynamic offset cancellation circuit uses two capacitors and a pair of MOS switches along with particular timing control, which has a relatively simple structure. This Hall sensor has been integrated with a  $0.15\mu\text{m}$  standard CMOS process. The measurement results show that the sensor system has a residual offset of below  $7\mu\text{V}$  and the equivalent input-referred thermal noise is below  $10\mu\text{V}$  over a temperature range from  $-40^\circ\text{C}$  to  $125^\circ\text{C}$ . The measured power consumption is below  $1\text{mA}$ .



**2D APPLICATION OF FDTD TECHNIQUE WITH NI LABVIEW**

**Paper ID-1496**

**A PAPER PRESENTED BY:**S RAJASEKHAR , GRS NAG KUMAR , K NARSINHA RAJU,  
DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWAREM, AP, INDIA.

**Abstract:**

In this paper, by using NI LabVIEW graphical programming, wave propagation in two-dimensional space is modelled with FDTD (Finite Difference Time Domain) method. FDTD method is applied to an infinitely long parallel plate waveguide for TM mode by using NI LABVIEW to compare its efficiency with text-based programming languages like MATLAB. It is found that although NI LABVIEW has complexity because of controlling nested loops (case structures) and data flow in arrays between loops to implement it takes less time than MATLAB to obtain simulation results.

**NATIONAL LEGISLATION AND INTERNATIONAL STANDARDS FOR FIRE DETECTION AND PROTECTION  
SYSTEMS FOR INDUSTRIAL TRANSFORMERS AND SUBSTATIONS OF INDUSTRIES FACILITIES**

**Paper ID-1497**

**A PAPER PRESENTED BY: KP PRASAD RAO , D SUDHA, D SESHU REDDY**  
DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWARAM, AP, INDIA.

**Abstract:**

The safety at transformers, and electrical substations of the industrial facilities is an extremely important aspect of minimizing the plant shutdown periods as well as workers safety. In the event of fire at a substation or transformer there might be casualties even worse, fatalities. Besides, equipment damage could occur. Partial or even complete plant shutdown is required in such cases which means loss of production. Hence, it is critical to install integrated smoke/fire detection systems and Indoor/Outdoor fire fighting systems. In this paper, both national and international standards/regulations have been reviewed and presented in a concise manner.

**ELECTRICAL EQUIVALENT CIRCUIT BASED ANALYSIS OF DOUBLE PENDULUM SYSTEM**

**Paper ID-1498**

**A paper presented by: S Rajasekhar , J Somlal, GRS Nag Kumar**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

In this paper, the analogy between a mechanical double pendulum system and an oscillating electrical system is presented. An exact electrical equivalent circuit model is proposed for analysis of mechanical system. After expressing mechanical variables and components in terms of electrical variables and components, the Modified Nodal Approach for circuit analysis is used. The accordance between mechanical simulation results and electrical simulation results verifies the proposed model and the analysis technique.

**COMPARISON OF MPPT AND PWM METHODS ON DESIGNING MICROCONTROLLER BASED POWER  
CONTROL UNIT FOR WIRELESS SENSOR NETWORKS**

**Paper ID-1499**

**A PAPER PRESENTED BY: P SIVA SAMKAR , SK MOULALI , SVN L LALITHA  
DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWARAM, AP, INDIA.**

**Abstract:**

The study represents the design and methods used to design microcontroller based photovoltaic charge controller and battery management system that utilizes maximum power point tracking (MPPT) algorithms for wireless sensor network used in a pipeline installed on the rural field. Perturb and observe (P&O) algorithm is considered in algorithm to ensure that the system works in high efficiency. Because it is less complicated and has good tracking accuracy. P&O algorithm extracts maximum power from solar panel and charges the battery in float and bulk mode along synchronous buck converter. Synchronous DC-DC converter is used to reduce losses during active time of the system. P&O algorithm is compared to non-MPPT photovoltaic control algorithms under same weather conditions. Photovoltaic panel, battery and load are protected by software and hardware design elements.

**A NEW ZVT TWO-SWITCH FORWARD CONVERTER**

**Paper ID-1500**

**A PAPER PRESENTED BY: M SAI KRISHNA REDDY , SKMOULALI , K NARSINHA RAJU**  
DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWAREM, AP, INDIA.

**Abstract:**

This paper presents a new zero voltage transition two-switch forward converter. ZVT is achieved by using a snubber cell for each switch. The proposed snubber cell includes an auxiliary power switch, a capacitor, an inductor and two diodes. The operation principle of the snubber cell is explained in detail. Motivation of this study is reducing turn-off losses and increasing switching frequency and thus increasing power density especially for high voltage and high power converters. Operation principles are explained in detail and simulation results are given for a two-switch converter used in a three-phase welding machine.

**FAILURE OF SWITCH FIVE LEVELS INVERTER FAULT ON SPEED SLIDING MODE  
CONTROLLER AND SPEED SLIDING ADAPTIVE NEURO FUZZY INFERENCE  
CONTROLLER OF INDUCTION MACHINE**

**Paper ID-1501**

**A PAPER PRESENTED BY: B LOVESHWARA RAO , D NARASIMHA RAO , GRS NAG KUMAR  
DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWAREM, AP, INDIA.**

**Abstract:**

The induction machine will play a role very important in the industry, but the existence of a certain defect returns their use limited as the defects of five levels inverter fault (switch fault). This article makes a study of the speed sliding mode controller (SMC) and speed sliding adaptive Neural Fuzzy inference system controller (SANFIS) with the existence of switch fault of five levels inverter to see the influence of these defects on the physical parameters of the machine. The results simulations are done by the use of Matlab/Simulink. Simulation results show clearly and robustness of controller SANFIS.

**GRASPING AND POSITIONING TASKS FOR SELECTIVE COMPLIANT ARTICULATED  
ROBOTIC ARM USING OBJECT DETECTION AND LOCALIZATION: PRELIMINARY RESULTS**

**Paper ID-1502**

**A PAPER PRESENTED BY: D SESHU REDDY , P SIVA SANKAR**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

Vision guided robots have more ability, functionality and adaptivity in industrial assembly lines than normal robots. This research attempts to increase the impact of computer vision on robotic positioning and grasping applications. Therefore, we addressed object detection and localization to perform robotic grasping and positioning using Selective Compliant Assembly Robot Arm (SCARA). The target position of SCARA robot is determined based on information obtained from object detection and position measurement process. This process is implemented on a circular object to simplify the task. For accurate position measurement, the distortion of camera lens is removed using camera calibration technique. In object detection, several methods are compared to detect circular holes in an input image. The most successful methods with 100% Precision, Recall and F-measure are used to detect the circular object. The position of this object is measured in world coordinate unit for pick-and-place operation. Then, the experiment is designed to move SCARA robot to the measured position of the detected circular object. The result showed that the robot is successfully moved to the measured position of the detected object with average positioning error (0.314, 0.155) mm.

**OPTIMAL OPERATION CONTROL OF MULTIPLE TYPE NEW ENERGY BASED ON POWER  
LOSS**

**Paper ID-1503**

**A PAPER PRESENTED BY: D KALYAN , T VIJAYA MUNI**

DEPARTMENT OF EEE, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWAREM, AP, INDIA.

**Abstract**

With wind power and photovoltaic as the main form of new energy power generation as a supplement to the traditional power grid, it is of great significance to study the optimal operation control in power grids with considering the power loss. For calculating the optimal operation capacity, this paper establishes an objective function with minimum power loss, and the constraint condition is the node voltage limit, capacity limit and branch transmission power limit. After analysis the influence of the dispersion and permeability of power supply on power loss of network, a genetic algorithm is used to solve the optimal operation model. The optimal operation capacity scheme is obtained by computing the IEEE33 standard system and the actual power systems in Jiangsu, China.



**IMPLEMENTATION OF A SPEED CONTROL SYSTEM USING ARDUINO  
Paper ID-1504**

**A PAPER PRESENTED BY:G SWAPNA , P SRINIVASA VARMA**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract:**

Road safety is a concern of all authorities. One of the most important safety concerns is excessive speed which results in accidents, injuries, death, as well as damage in public property. Therefore, the imposition of automatic speed is essential and important in municipality's arsenal to prevent and combat excessive speed. The speed control system that we used in this project depends on the ultrasonic radar. Where this radar unit is capable of tracking multiple vehicles together across multiple tracks. The system consists of an ultrasonic sensor, an Arduino board, and a webcam. Speed and location of vehicles are determined accurately by using ultrasonic sensor, and the distance is calculated over a simple period of time. The vehicles like ambulances were excluded from the speed limit because the speed is necessary in this case to save lives. In the proposed system, if the speed of the car reaches 95% of the specified speed limit of the road, the system will warn the driver by sending a light packet means will be punished if the speed exceeds. If the vehicle exceeds the predefined speed, the system will take a high-resolution digital image of the vehicle and the license plate. The image taken will be presented as a guide to the competent authorities as evidence of the detailed information (location of the event, maximum speed, time, date and speed of the car). By using this prototype speed control system, speed monitoring can be done through sensors, in efficient and cheaper way.

**A COMPARATIVE STUDY ON MICRO-DOPPLER SIGNATURE GENERATION METHODS FOR  
UAVS USING ROTOR BLADE MODEL  
Paper ID-1505**

**A PAPER PRESENTED BY:SK. MOULALI, S RAVI TEJA**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

Identification of the unmanned aerial vehicle (UAV) is a challenging problem. For identification, micro-Doppler effects from the rotors of UAVs are widely used to extract the features. Short Time Fourier Transform (STFT), Wigner-Ville distribution (WVD) and s method are the most common methods to obtain micro-Doppler signatures. Rotor blade length, number of blades and rotation rate have significant distinguishable effects on the micro-Doppler signatures. In this paper, effect of blade length, number of blades and rotation rate on micro-Doppler signatures are presented.

**DESKTOP ARTILLERY SIMULATION USING AUGMENTED REALITY**

**Paper ID-1506**

**A paper presented by: P Linga Reddy, S Palani Kumar**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

Augmented reality (AR) is a popular subject that is commonly associated with entertainment purposes. However, it can be practically useful in many other areas, from medicine to military technologies. Creating an interactive 3D ballistics simulation on a table is one of those purposes. In this paper, we present the work we carried out for designing and developing an augmented reality military game. The game is an artillery simulation where the player controls cannons and tries to take successful shots. The key feature of the game is that it utilizes AR technologies to place the game environment in the player's real life environment through smart AR glasses. The terrain where all the action takes place, is perceived to be on the table or floor in player's room. A specific 2D image is used to track the position and orientation of the surface where the game environment is placed. A general research about the background of AR technologies and game development, and detailed walk-through of the project's development are provided in the following sections.

**AN APPROACH OF DATA FUSION FOR FUZZY ART BASED VISUAL RECOGNITION**

**Paper ID-1507**

**A paper presented by: A Pandian , GG Raja Sekhar**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

Visual Place recognition in robotics is motivated by the challenges of navigation and mapping. Given an image, a robot can map or recognize his environment. The ability to perform well is related to the quality of the information acquired and processed by the system. As the variation of the real world affects significantly the results, it can lead, in some cases, to a poor performance. The improvement is related to changes due to illumination, weather or season at outdoor with abundant features and textures for place recognition as in indoor environment, the robot will have less features or textures to process. In this paper, we present an approach of place recognition inspired by the FuzzyART. The input will be a Normalized Scanline Profile (NSP) and a pre-treatment will be performed by two fuzzy ART subsystems. The matching being the threshold for decision, we will fuse the matching output of the subsystems using a Sugeno-Takagi Fuzzy Inference System. The developed approach was tested on two different dataset to evaluate its ability to perform on outdoor and indoor environments and to limit the use of data storage. The results indicate that correct setting leads to optimal results.

**BINARY ARTIFICIAL BEE COLONY ALGORITHMS FOR {0-1} ADVERTISEMENT PROBLEM**

**Paper ID-1508**

**A paper presented by: Y Srinivasa Rao, K P Prasada Rao**

Department of EEE, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

**Abstract**

A company wants to select magazine publishers for advertising. It is vital for the company to maximize the number of subscribers reached by advertising while not exceeding its advertising budget. To determine which publishers to select can be considered as an advertisement optimization problem and can be solved by using binary metaheuristics. Artificial Bee Colony (ABC) is one of the most popular metaheuristics in the field of swarm intelligence and has been widely used in numerical optimization and engineering applications. To solve binary advertisement problem, three binary variants of ABC algorithm are proposed in this paper. The first binary variant is based on Sigmoid transfer function and indicated as sigABC, while the second and the third binary variants are based on exclusive OR (xor) and crossover genetic operators, respectively, and are indicated as xorABC and crossoverABC. The proposed binary ABC variants are evaluated using 20 instance-dataset. The comparative experimental results show the superior performance of the crossoverABC and sigABC methods compared to xorABC technique.

EFFICIENT MODEL FOR MAP REDUCE WORKLOAD USING HADOOP CLUSTERING

**Paper ID-1508**

**A paper presented by:- J.SRAVANTHI & DR. P.NIRANJAN**

Research scholar mewar university Chittorgarh Rajasthan

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### **ABSTRACT**

The volume of data generated in today's modern society has explosively risen. Different forms of data, including structured, semi-structured and unstructured data, exist. This creates a major difficulty for evaluating this data, as conventional techniques of data processing are not built to handle these data. Map Reduce is a programming methodology and accompanying integration that uses huge volumes of data to handle and produce. A Map Reduce workplace comprises in particular of a number of jobs, each consisting of numerous map tasks which lead to several work reductions. This software uses techniques to maximize the time required for an offline MapReduce workload execution time and completion time. Our approaches for arranging jobs are optimized in Map Reduce workloads, and we can also optimize the length and completion of MapReduce workloads. Our study is focused on solving memory and response time problems. By using the suggested technique, we were able to get outcomes up to 90% better than earlier methods. Our algorithm will substantially improve the system and the entire time of the project.

*Keywords: MapReduce, Hadoop, job ordering, makespan, total completion time*